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G. F.

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Estimation of Local Short Run Stumpage Price and Sale Response to National Forest Timber Offering

Gerard F. Schreuder	Co-Principal Investigator
Thomas R. Waggener	Co-Principal Investigator
Ernest Lee Medema	Graduate Research Assistant

University of Washington
College of Forest Resources
Center for Resource Management Studies

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I. INTRODUCTION

A) Background and Objectives

Markets for timber in the United States represent an intricate moisaic of economic forces which ultimately determine the flow of timber from the forest to the consumers of wood products. The U.S. Forest Service is an active and major participant in these markets, providing in the aggregate some 22% of sawtimber supply and 17% of total roundwood supply in 1970.[1]

For a number of reasons, considerable interest has focused on the role of the Forest Service in timber markets. In part, these reasons are internal to the Forest Service itself: the preparation of timber sales programs, the orderly conduct of the sales themselves, and budgeting interests in timber harvest receipts. Likewise, external concerns have arisen regarding the level of timber harvests, the timing of sales and the impact the Forest Service has on local timber markets with respect to both the quantity of timber as well as price.

This cooperative study was undertaken with two specific objectives:[2]

a) "Estimation of supply and demand relations for National Forest timber in local markets where the timber is sold," and

b) "Development of a procedure to estimate timber sale volume and price, timber harvest and price, and through this, timber sales receipts."

A third general objective was to access "how fruitful the above approach is for stumpage market analysis and whether it has applications to non-National Forest conditions."

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[1] USDA, Forest Service, RPA - The Nation's Renewable Resources - An Assessment, 1975, 6P0, 1976, pp.260-261.

[2] Study Plan, U.S. Forest Service (WO) Thomas J. Mills, March 19, 1974.

The nature of timber markets, including both wood products and stumpage, have received considerable attention in recent years. The development of appropriate econometric techniques in connection with computer analysis has facilitated the quantitative investigation of market behavior at several levels.

Many studies have been undertaken in the past to analyze the supply and demand relationships in forest products (including stumpage) markets. Many of these studies, however, are broadly aggregated utilizing data applicable to and defining market areas that are national or regional in scope. Furthermore, many of these broadly aggregated models, perhaps in part because of the level of aggregation, analyze forest products markets from a macro-economic perspective while considering stumpage markets as a single sector. For example, Robinson's model of Douglas-fir and southern pine lumber and stumpage markets.[3] and Adam's multi-regional model of softwood stumpage and end product prices,[4] utilize this approach. Alternatively, other researchers, in analyzing the supply and demand relationships in forest products markets, have utilized an extremely disaggregated approach and have used data on a sale-by-sale basis. Many of these studies attempt to analyze particular market conditions and actual timber sale characteristics (i.e., log quality, distance to mills, etc.) that effect the price of stumpage for a particular sale. For example, Guttenberg's[5] analysis of timber characteristics and stumpage

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[3] Robinson, U.C., "An Econometric Model of Softwood Lumber and Stumpage Markets, 1947-1967" Forest Science, 1974, 20; 171-179.

[4] Adams, D.M., The Response of Softwood Stumpage and End Product Prices to Changes in National Forest Harvest Schedules, Report for a Cooperative Aid Research Agreement with the Pacific Northwest Forest and Range Experiment Station, USDA, Forest Service and Oregon State University, October, 1975.

[5] Guttenberg, S., Influence of Timber Characteristics Upon Stumpage Prices, U.S.D.A. Forest Service, Southern Forest Experiment Station, Occasional Paper #146, 1956.

prices, and Anderson's[6] analysis of pine sawtimber prices in South Carolina, use this micro- or sales approach.

B) Conceptual Definition of Stumpage Markets

The conceptual approach undertaken in this analysis was intermediate between the broad aggregation and the sale-by-sale approach. It was hypothesized that this approach would reduce the problems associated with aggregate models while attempting to apply "average" relationships to smaller market areas as well as to reduce the data "noise" associated with sale-by-sale analysis attributable to the multitude of factors which may influence the outcome of a particular sale.

The approach utlized in this study was to define local markets for National Forest timber in a small regional sense (i.e. at the individual National Forest level) and to utilize quarterly averages for all data to "filter out" the individual sale data variations. Furthermore, the approach was not a macro approach in which stumpage markets are treated as a single sector. The approach was instead to attempt to disaggregate stumpage markets into three distinct components: sales, inventory, and harvest. The analysis attempts to recognize factors that effect each of these components either collectively or separately. Although it is generally recognized that decisions about purchasing National Forest timber and decisions relative to harvesting of that timber can be viewed as two distinct markets with distinct supply-demand relationships, it is rarely explicitly brought out in stumpage market analysis. This recognition, however, is crucial to this analysis especially in terms of the dual objectives of structural definition of sales demand and forecasting National Forest timber sale receipts.

1) Timber Sales

Timber sales, as a component of the "stumpage market," represent a market for the exchange of property rights in standing timber for future

[6] Anderson, W.C., Pine Sawtimber Price Behavior in South Carolina, U.S.D.A. Forest Service, Southern Forest Experiment Station, Research Paper SO-42, 1969.

utilization. Conceptually, the timber sales contract represents an exchange agreement whereby the Federal Government sells its rights in standing timber to purchasers who anticipate utilization of that timber during the period of the contract. Typically, this demand for stumpage represents a 2-5 year expectation.

2) Timber Inventory

Timber purchased in the current market period is rarely utilized during that same period, particularly so when the market period is taken as a calendar quarter. Rather, timber purchases can be envisioned as additions to uncut inventory - or the stock of timber which is available for future utilization. The mechanics of inventory (stock) adjustment is complex, and not fully investigated, but it is apparent that timber operators weigh heavily future wood "requirements" which in turn represent future expectations about wood products markets.

3) Timber Harvest

Current markets for wood products strongly influence production decisions in the manufacturing sector. This leads to a derived demand for timber harvests, or removals from timber inventory (uncut stocks). Decisions regarding "supply" from inventory reflect judgements about the current market relative to expectations about future markets.

A unique aspect of the harvest "market" is that price paid at time of harvest is not simultaneously determined by traditional equilibrium forces. Rather, harvest "price" is a lagged function of the timber sales market in prior years, with some adjustment afforded via rate redetermination and/or price escalation where such policies are implemented. As a consequence the "average price" of timber harvested is largely determined by operator decisions

as to what timber under contract to harvest and in what volume relative to past bid prices and current market decisions.

This disaggregated formulation of the stumpage market can be generalized as shown below (Figure 1).

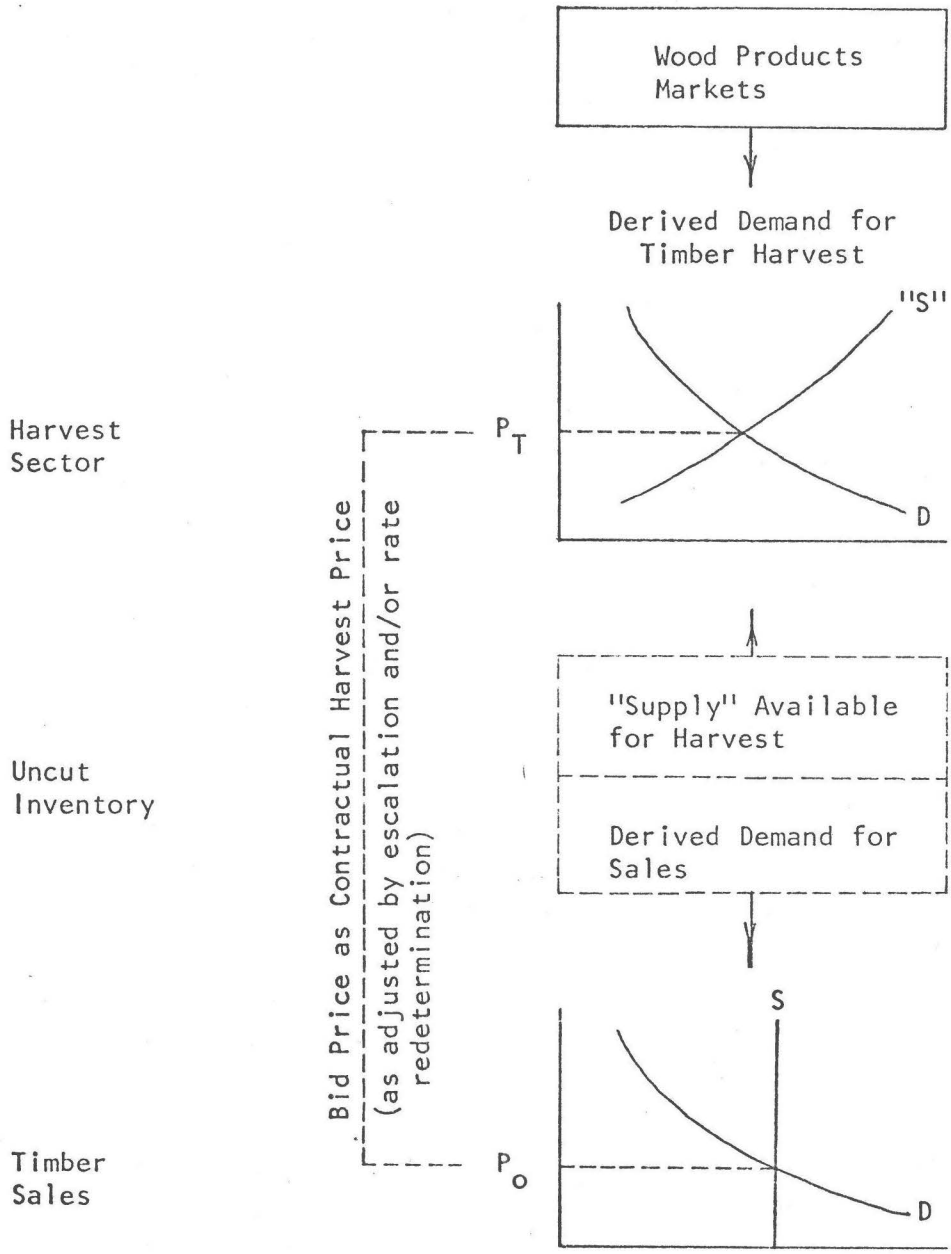
"Supply", as used in this definition of the disaggregated stumpage market, needs some clarification. Supply, in the traditional economic sense, implies marginal cost for alternative quantities of a good or service made available during a market period. In the timber sales sector, however, National Forest sales volume is exogenously determined by the programmed sales. Price in this sector, therefore, adjusts to clear the quantity offered rather than the reverse.

Likewise, supply in the Harvest Sector represents the "cost" or bid (contractual) price of the timber as well as the implicit cost of inventory adjustment. For example, a premature harvest of uncut inventory may involve a sacrifice of future value in a rising market. Failure to harvest (even at a current value below bid price) may involve a loss in falling markets in the absence of improved future conditions.

The objectives of this study require the investigation of the structural nature of demand in the timber sales sector of the stumpage market. It is at this level that rights to public timber are contracted; hence, it is the demand for timber sales that is critical. Likewise, it is necessary to estimate the equilibrium harvest quantity (removals from uncut volume under contract) and the implicit contract price in the harvest sector to determine timber receipts. Appropriate model specification to recognize this dual objective is discussed in Section II.

Figure 1.

Disaggregated Stumpage Market



Allowable Cut → Sales Program for National Forest

C. Empirical Basis for Stumpage Market Analysis

As described above, this analysis utilizes quarterly data on timber sales activities at the National Forest level. The data variables and sources are discussed in Section III. Four National Forest units were selected in each of six National Forest Regions to represent a broad cross-section of national forest conditions, timber types, and local timber markets. Specific National Forests selected were based on consultation with the Regional Office staff and were selected to represent as homogeneous intra-regional conditions as possible. Factors considered included the degree of dependence on National Forest timber, scale of mill capacity in market area, value of timber harvested, geographical location, industrial mix and timber species. Forest units included in the data base are listed in Table 1 and shown in Figure 2 below.

TABLE 1.

National Forest Parcels Selected for
National Forest Stumpage Price Analysis

Region 6 (Portland)

05 Mt. Baker
03 Gifford Pinchot
06 Mt. Hood
15 Umpqua

Region 1 (Missoula)

16 Lolo
03 Bitterroot
14 Kootenai
10 Flathead

Region 5 (San Francisco

17 Tahoe
03 Eldorado
16 Stanislaus
15 Sierra

Region 8 (Atlanta)

13 Texas
06 Kistachie
09 Ouachita
10 Ozark - St. Francis

Region 2 (Denver)

06 Medicine Bow
11 Routt
09 Rio Grande
13 San Juan

Region 9 (Mil.)

06 Nicolet
04 Manistee - Hurron
10 Hiawatha
03 Chippewa

THE NATIONAL FOREST SYSTEM

FIGURE 2. STUDY FORESTS

II. DEMAND AND SUPPLY MODEL

This study involved two distinct objectives. One objective was to estimate the supply and demand relations for National Forest timber in local markets where timber is sold to be utilized in determining the impacts on these markets of possible changes in National Forest timber sale volumes. A second objective was to develop a procedure to estimate timber sale volume and price, timber harvest volume and price, and through these factors, timber sale receipts to be utilized in estimating National Forest timber sale receipts.

In terms of formulating an econometric model, these two objectives require somewhat different statistical techniques. The first objective involves estimating structural supply and demand relations in order to meaningfully interpret coefficients of such estimates and to test hypothesis regarding the coefficients in view of a priori economic theory. To accomplish this objective, one must specify the structure of the model such that it provides unbiased statistical estimates. This is necessarily true because many test procedures are valid only when based on unbiased estimators of a specified parameter.[7]

Where the objective is to provide estimates (such as timber sale receipts) the concern in model specification is not necessarily the elimination of bias, but that of maximum precision of the estimates. In this case, a minimum variance estimator is desirable, even though it may be biased.[8]

When faced with a situation in which one has to choose between an unbiased estimate with a relatively large variance and a biased estimate with small

[7] Rao, Potlari, and Miller, Roger LeRoy, Applied Econometrics, Wadsworth Publishing Company, Inc., Belmont, California, 1971. p.27.
[8] Ibid, p. 27

variance, then either the bias or variance cannot be utilized as the sole criterion for model specification choice. According to Rao[9], one criterion that gives equal importance to these two measures is the mean square error, defined as the sum of variance and the square of bias. If one of these two components gets smaller at the expense of the other, then the net "benefit" is reflected by the mean square error. Therefore, the optimal "benefit" of the trade-off between bias and precision is achieved where the mean square error is minimized.

The choice of an estimation procedure depends crucially on the intended use of the estimates. In view of these model discrepancies, and in view of the likely uses of the estimates by the Forest Service, two separate econometric models were formulated in this study in order to most effectively achieve the two stated objectives.

A. MODEL FORMULATION

In developing an econometric model of the supply and demand relationships for National Forest timber, the general micro-economic theory of the firm was utilized.

1. Derivation of a conceptual demand model

It is generally recognized that the demand for National Forest timber is a derived demand. That is, demand for National Forest timber as a factor input to the production process of wood products industries is ultimately derived from consumers' final demand for wood products from these processing industries. Therefore, to model a demand relationship for National Forest timber, one must first consider the interrelationship of timber (or stumpage) and timber processing. This

[9] Rao, Ibid, p.27.

interrelationship can be conceptually separated into three distinct phases[10], with each successive phase being connected by a market. This conceptualization is depicted in Figure 3.

First is the "tree" farming stage where stumpage is provided. Second is the logging stage where the timber is harvested and delivered to mills for further processing. Third is the manufacturing stage where the timber is processed into finished products.

Each of these stages imply separate markets with interrelated supply and demand relationships.

The demands for the outputs of the manufacturing sector result from demands by consumers for these "final"[11] wood products. The derivation of these demands are considered exogenous.

The supply of outputs by the manufacturing sector is determined by the technological production function of the manufacturing industries and the quantity and prices of the factor inputs utilized.

A generalized formulation for supply may be developed for an individual firm in the manufacturing sector which faces competitive markets for both inputs and outputs. Let the technological production function be given by:

$$\dot{y} = F(X,L,K) \qquad (1)$$

where $\dot{y}$ = the quantity of outputs produced

X = the quantity of timber (or log) input

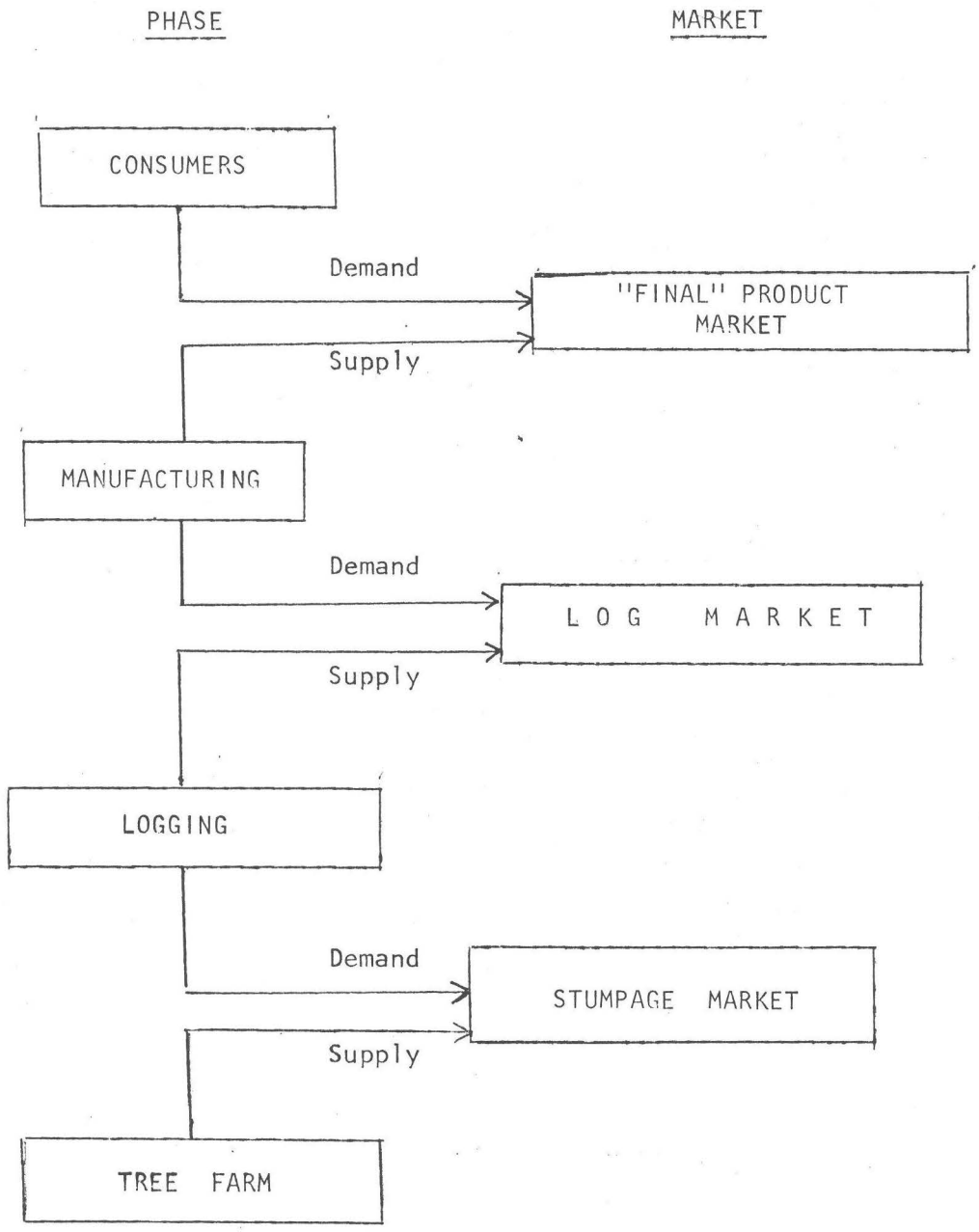
L = the quantity of labor input

K = the quantity of capital (excluding logs) input.

[10] Division into these economic phases is consistent with Forest Service perception of the interrelationships as evidenced by standard timber appraisal techniques in selling stumpage. That is, logging costs and manufacturing costs are deducted from final product selling price to arrive at an appraised value for National Forest timber.

[11] The term final here is somewhat misleading in that these outputs may, in turn, be used as inputs to some other producing firms before consumption is really "final." Consider, for example, the lumber outputs of a sawmill as used as inputs by construction industries.

FIGURE 3: Three Phases of Forest Industry Interrelationships



Also, let the prices faced by this firm be given by:

P_y = the price at which the firm sells its output

P_X = the price the firm pays for log inputs

P_L = the price the firm pays for labor inputs

P_K = the price the firm pays for capital inputs

In a competitive industry, the objective of a firm is assumed to be profit (π) maximization. Therefore the objective function of the firm can be specified as

$$\text{Max } \pi = P_y F(X,L,K) - (P_X X + P_L L + P_K K) \qquad (2)$$

This functional relationship simply states that profits, which are defined as total revenue minus total costs, are to be maximized.

The necessary mathematical conditions to maximize this objective function are

$$\frac{\partial \pi}{\partial X} = P_y F_X - P_X = 0 \qquad (3a)$$

$$\frac{\partial \pi}{\partial L} = P_y F_L - P_L = 0 \qquad (3b)$$

$$\frac{\partial \pi}{\partial K} = P_y F_K - P_K = 0 \qquad (3c)$$

where

$$F_X = \frac{\partial F(X,L,K)}{\partial X}, \quad F_L = \frac{\partial F(X,L,K)}{\partial L}, \text{ and } F_K = \frac{\partial F(X,L,K)}{\partial K}$$

These are well-known conditions in economic theory that state that, in order to maximize profits, firms will utilize inputs in production in such quantities that the marginal revenue derived from using that input is equal to its marginal cost (or price) holding other inputs constant. These necessary conditions reflect a generalized system of three equations with four parameters (P_y, P_X, P_L, P_K) and three unknowns (X,L,K).

Therefore, one can solve these three equations simultaneously and determine the three unknowns:

$$X = X^{*}(P_X, P_L, P_K, P_y) \tag{4a}$$

$$L = L^{*}(P_X, P_L, P_K, P_y) \tag{4b}$$

$$K = K^{*}(P_X, P_L, P_K, P_y) \tag{4c}$$

These equations reflect the firm's demand for the three factors of production with equation 4a being the derived demand of the firm for logs as a factor input. These equations express quantity demanded as a function of the prices of both product (P_y) and all factor inputs.

These expressions for input quantities can be substituted into the production function (equation 1). The result is the manufacturing firm's supply function:

$$y^{*} = F(X^{*}, L^{*}, K^{*}).$$

The derived demand for log inputs by the firm (equation 4a) is the demand schedule faced by the logging sector.

Similarly, the logging sector can be modeled to determine a derived demand for its inputs which include stumpage from the tree farming sector.

Let the technological production function for the logging sector be given by:

$$X = f(x,l,k) \tag{5}$$

where X = the quantity of logs produced (where production includes harvesting and delivery)

x = the quantity of timber inputs

l = the quantity of labor inputs

k = the quantity of capital inputs excluding timber

Also, let the respective prices given by

P_X = the price at which the firm sells its output

P_x = the price the firm pays for timber inputs

P_l = the price the firm pays for labor inputs

P_k = the price the firm pays for capital inputs

The objective function for the logging sector may be specified as

$$\max \pi = P_X f(x,l,k) - (P_x x + P_l l + P_k k) \qquad (6)$$

The necessary conditions for profit maximization are:

$$\frac{\partial \pi}{\partial_x} = P_X f_x - P_x = 0$$

$$\frac{\partial \pi}{\partial_l} = P_X f_l - P_l = 0$$

$$\frac{\partial \pi}{\partial_k} = P_X f_k - P_k = 0$$

From these, solve for the factor demand functions:

$$x = x^* (P_X, P_x, P_l, P_k) \qquad (7a)$$

$$l = l^* (P_X, P_x, P_l, P_k) \qquad (7b)$$

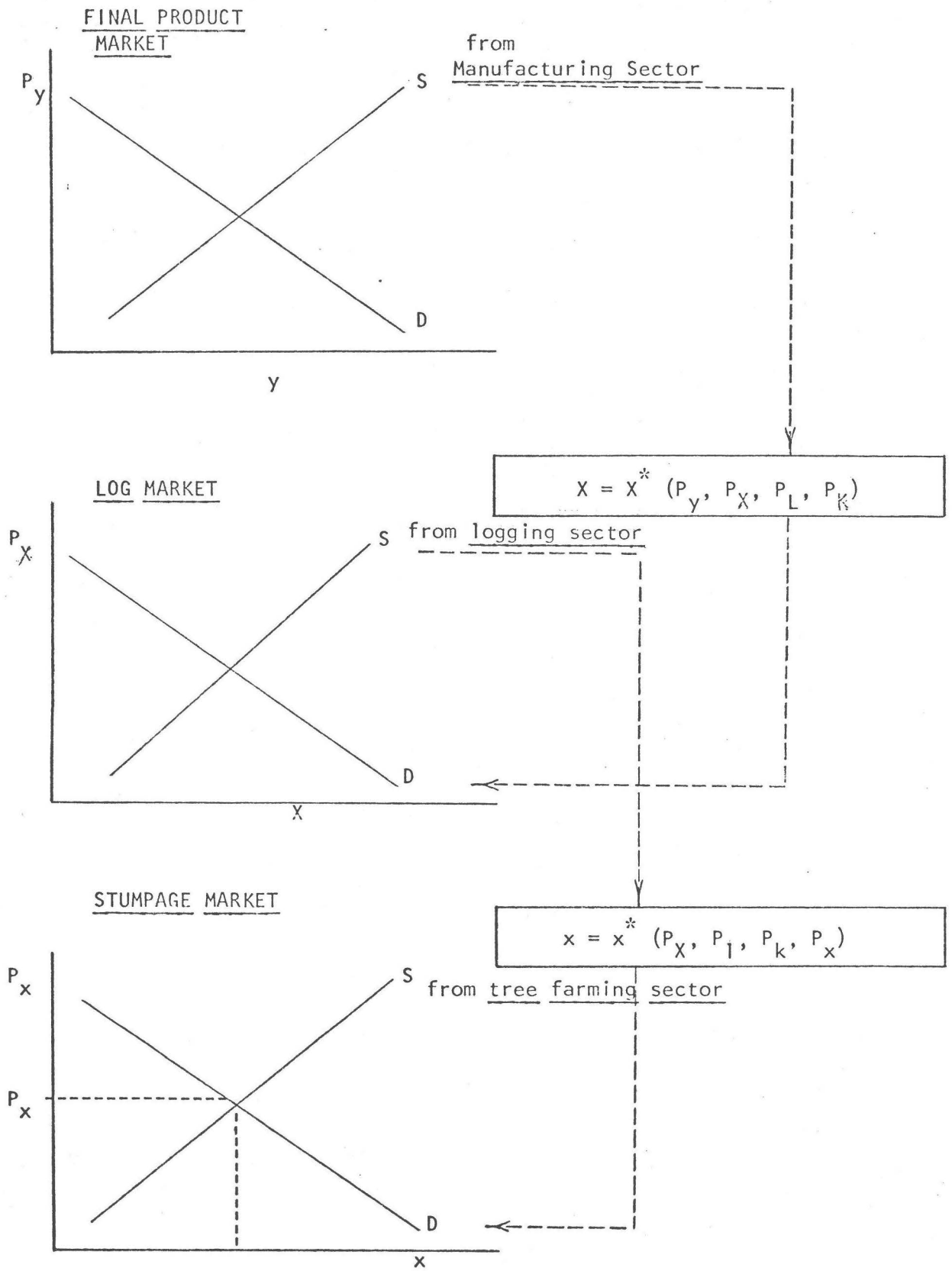
$$k = k^* (P_X, P_x, P_l, P_k) \qquad (7c)$$

Therefore, the demand for timber (equation 7a) as derived from the logging sector (the factor demand function for timber) expresses the quantity demanded as a function of the price of log outputs (P_X) and the prices of the factor inputs. By substituting these expressions for the quantity of logging inputs demanded at various prices into the production function of the logging sector (equation 5), the supply schedule of the logging sector is determined.

A similar model could be developed for the tree farming sector. However, consideration of the supply function of the tree farming sector or the supply of National Forest timber sold will be considered in the following section.

The resulting system of economic relationships is depicted in Figure 4.

FIGURE 4. Derived Demand for Stumpage



In essence, the demand for National Forest timber (stumpage) is a derived-derived demand. That is, it is a derived demand from the demand for the outputs of the logging sector which, in turn, is derived from the demand for outputs of the manufacturing sector. Therefore, the demand for stumpage is ultimately a function of both the price of output and inputs in the logging sector as well as the price of outputs and inputs in the manufacturing sector.

These relationships can be more clearly defined if one interprets the model as a vertically integrated firm in which the logging and manufacturing sectors are combined (Figure 5). In this case, the log market is no longer identified separately since there is no actual separation of consumers and producers to formulate a market. Consequently, the price of logs (P_x) is removed from the equations and the derived demand for logs substituted in its place.

The production function of the integrated firm is thus:

$$y = F(X,L,K) \text{ where } X = f(x,l,k) \tag{8}$$

so that,

$$y = F(f(x,l,k),L,K) \tag{8a}$$

The objective function becomes

$$\text{Max } \pi = P_y[F(f(x,l,k),K,L] - P_x x - P_l l - P_k k - P_L L - P_K K \tag{9}$$

The necessary conditions for profit maximization are

$$\frac{\partial \pi}{\partial x} = \frac{\partial F}{\partial X}\frac{\partial X}{\partial x} - P_x = 0 \tag{10a}$$

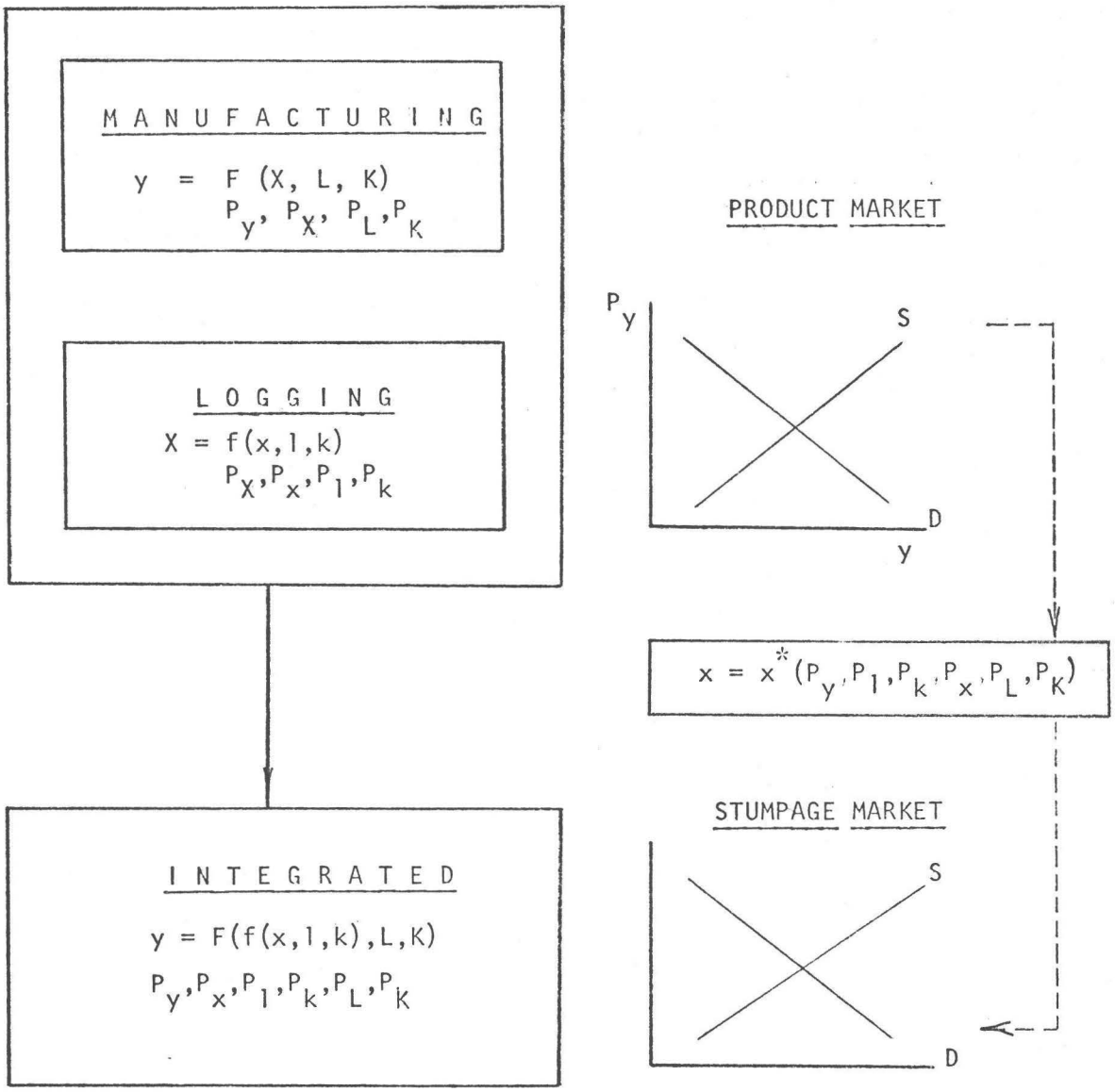
$$\frac{\partial \pi}{\partial l} = \frac{\partial F}{\partial X}\frac{\partial X}{\partial l} - P_l = 0 \tag{10b}$$

$$\frac{\partial \pi}{\partial k} = \frac{\partial F}{\partial X}\frac{\partial X}{\partial k} - P_k = 0 \tag{10c}$$

$$\frac{\partial \pi}{\partial L} = F_L - P_L = 0 \tag{10d}$$

$$\frac{\partial \pi}{\partial k} = F_K - P_K = 0 \tag{10e}$$

FIGURE 5: Vertical Integration and Derived Demand



This constitutes a system of five equations with six parameters (P_y, P_l, P_k, P_x, P_L, P_K) and five unknowns. Solving these equations simultaneously results in the derived factor demand curves. For stumpage, the derived demand, expressed as the quantity demanded as a function of output and input prices is

$$x = x^* (P_y, P_x, P_l, P_k, P_L, P_K). \qquad (4a')$$

The structure of the derived demand equation for stumpage (Equation 4a') is implicit. If it were known explicitly, one could solve the equation mathematically. Further, it would be possible to express the price of stumpage as a function of quantity demanded. That is, one can express a demand function as (a) the quantity demanded as a function of the price of the good, or (b) the price schedule of demand as a function of quantity. For example:

$$q = \phi (p) \text{ or } p = \psi (q)$$

are equivalent statements.[12]

Therefore, in terms of the vertically integrated firm model developed above, the derived demand for stumpage may be expressed as

$$P_x = g(x, P_l, P_k, P_L, P_K, P_y). \qquad (4a'')$$

This demand equation merely states that the price of timber (P_x) is related to (a) costs incurred in logging operations (P_l, P_k), (b) the price of finished wood products (P_y), (c) the volume of timber sold (x), and (d) the costs incurred in manufacturing operations (P_L, P_K).

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[12] For example see:
R.G.D. Allen, Mathematical Analysis for Economists, St. Martins Press, New York, 1938, p.112.

2. Derivation of a conceptual supply model

The supply model specification for National Forest timber is not necessarily determined by factors inherent in traditional micro-economic theory. The National Forest timber sale program is largely based upon the predominantly biological sustained yield model. The short run quantity of timber supplied (offered for sale) is not a function of the interaction of a technological production function, factor prices, and final product or output prices. Supply is thus based primarily upon the technological production function with the quantity supplied not being a direct function of input and output prices.

In essence, the quantity of National Forest timber offered for sale is an administratively determined allowable cut, and is therefore economically valid to interpret this supply function as being price inelastic, as depicted in Figure 6.

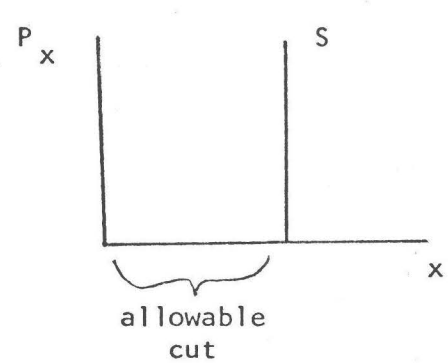

Figure 6: The Supply of National Forest Timber

3. Mathematical specification of demand

If one assumes that the price of timber is linearly related to each of the independent variables specified in the conceptual derived demand equation (equation 4a''), then a first approximation of the explicit mathematical structure of this demand may be expressed as:

$$P_x = \alpha_0 + \alpha_1 x + \alpha_2 P_1 + \alpha_3 P_k + \alpha_4 P_L + \alpha_5 P_K + \alpha_6 P_y. \qquad (11)$$

This equation may be estimated by utilizing ordinary least squares estimation techniques. However, since one objective is to use this equation to examine possible impacts on stumpage prices of possible changes in Forest Service timber sale volume offerings, the model must be respecified so as to allow estimates of the price elasticity of demand. Therefore, it is necessary to express the model structure in terms of the logarithms of the variables. This will result in the estimated regression coefficients being expressed in terms of percentage changes in the dependent variable with respect to percentage changes in the independent variables.[13] Therefore, the structural specification becomes:

$$\ln(P_x) = B_o + B_1 \ln(x) + B_2 \ln(P_1) + B_3 \ln(P_k) + B_4 \ln(P_L) + B_5 \ln(P_K) + B_6 \ln(P_y) \qquad (12)$$

The coefficient B_1 is of primary interest with respect to elasticity of demand. With this specific formulation, however, the value of the B_1 coefficient, which represents

$$B_1 = \left. \frac{\partial \ln (P_x)}{\partial \ln (x)} \right| \text{ Ceteris Paribus}^{14} \qquad (13)$$

cannot be directly interpreted as the traditional economic price elasticity of demand. Instead:

$$\varepsilon_d = \left. \frac{\partial \ln (x)}{\partial \ln (P_x)} \right| \text{ Ceteris Paribus} \qquad (14)$$

[13] Elasticity of demand = $\frac{\%\text{ change in quantity}}{\%\text{ change in price}}$

[14] Ceteris Paribus = holding the value of all of the other independent variables constant.

Equation (14) is derived in a similar manner, but from a demand equation which specifies the quantity demanded as a function of price. That is, elasticity is a measure of the percentage change in quantity demanded divided by a percentage change in price. However,

$$\varepsilon = \frac{\partial \ln (x)}{\partial \ln (P_x)} = \frac{1}{\frac{\partial \ln (P_x)}{\partial \ln (x)}} , \qquad (15)$$

Therefore, the model specification of demand utilized in this analysis (equation 12) results in the interpretation of the B_1 coefficient as the inverse of the price elasticity of demand:

$$B_1 = \frac{1}{\varepsilon} \qquad (16)$$

or

$$\varepsilon = \frac{1}{B_1} \qquad (16a)$$

4. Application of a single equation model

A single equation demand model was utilized in lieu of a set of simultaneous demand and supply equations. This specification was based on two considerations: (1) that the supply of National Forest timber is price inelastic, and (2) that the model be kept as simple as possible yet conceptually complete.

In an analysis of the utilization of various model formats as applied to analyzing demand for farm products, Fox[15] discussed the advantages and disadvantages of utilizing single equation versus simultaneous equation models for estimating demand.

In discussing market analysis, Fox differentiated between estimation and structural market definition. He stated,[16]

"If the purpose of an analysis is to estimate the expected price associated with given values for such variables as size of crop and consumer income, the best answer can be obtained by a least-squares regression with price dependent and other variables independent. If the purpose is to estimate the elasticity of demand and other structural coefficients, this equation may not give an unbiased estimate. It will do so if, and only if, current supply and other independent variables are not measurably effected by price during the marketing period. These conditions are approximately met for many farm products."

Fox elaborated on the conditions to be met as criteria for selecting the appropriate structural specification. He states,[17]

"To justify the use of the single-equation least-squares approach in estimating the elasticity of demand and similar coefficients, the following questions must be answered:

1. Is supply of the given commodity affected by current price?

2. Is consumer income significantly affected by changes in price or consumption of the given commodity?

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[15] Karl A. Fox, The Analysis of Demand for Farm Products, U.S. Department of Agriculture Technical Bulletin No.1081, Washington, D.C., September, 1953.

[16] Fox, Ibid, p.9.

[17] Fox, Ibid, pp. 11-14.

3. Is more than one domestic outlet available for the given commodity?

4. Is consumption of the given commodity significantly affected by current price or by the demand for export or storage?

If each of these four questions can be answered in the negative, a statistical demand function fitted by least squares should approximate the "true" or structural demand function."

The most important consideration is the price response of supply. Since, as previously discussed, the National Forest timber sale program is largely based upon administrative decisions, the quantity of National Forest timber supplied (sold) in a given quarter is not a function of current market price. It is price inelastic. It is believed that consumer income is not significantly effected by changes in the price or consumption of National Forest timber. Although disposable personal income is affected directly or indirectly by prices and production of all goods and services in the economy, for any given commodity, the question involved is the extent to which disposable income is influenced by variations in the consumption and price of the commodity in question (National Forest Stumpage).

Since final wood products (lumber and wood, and pulp and paper) are equivalent in retail value to only less than 2% of national income[18] and stumpage values account for only a portion of this percentage through the process of derived demand, variations in the supply of National Forest timber would undoubtedly account for a relatively small portion in total variation in disposable income. Recognition of localized timber markets would further strengthen this assertion.

There is primarily only one domestic outlet available for National Forest timber and that outlet is for further processing. Although processing may be subdivided into basically two separate categories, (a) pulp, paper and allied products, and (b) lumber and wood products, and these could be

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[18] Survey of Current Business, U.S. Department of Commerce, Volume 48, number 7, July, 1968.

considered as separate domestic outlets, such a distinction is beyond the data limitations of this analysis. In general, National Forest timber is not a homogenous product. The timber demanded by pulp, paper, and allied products mills may be qualitatively different than that demanded by lumber and wood products mills, in terms of species, log quality, log size, etc. This would imply distinct markets and distinct domestic outlets. However, a great deal of discretion exists for the purchaser of timber to allocate that timber to the most favorable markets at the margin. Hence, in the absence of barriers to such adjustments, identification of differentiated derived demand at the stumpage market level is redundant.

The influence of exogenous demand factors related to inventory adjustmert and/or export again pose the possibility of a differentiated demand influencing the level of current consumption. Consumption, however, as defined by Fox, relates to final product markets rather than derived demands for factor markets. Final consumption of processed wood products in a given calendar quarter (domestic or foreign) is unlikely to be affected measurably by incremental timber sales in local Forest Service timber markets during that same quarter. Timber sale markets, by the very nature of timber harvesting and processing, are future-oriented. Timber sold in a given period (Quarter) would very seldom enter into harvesting and production activities during this same period. For this reason, the stumpage sector as traditionally defined is disaggregated in this analysis whereby all sales are expressed as additions to inventory with separate recognition of harvest decisions drawing upon existing sold but uncut inventory in response to product market derived demand.

The demand and supply relationships for National Forest stumpage markets (timber sales) reasonably approximate the prerequisite conditions outlined by Fox to justify the utilization of a single equation demand model in lieu

of a simultaneous demand-supply model without creating bias in the resultant estimates of structured coefficients. Such a model specification is used in this analysis.

B. MODEL RESULTS AND DISCUSSION

1. The selection of available variables

In order to estimate the demand equation previously derived from the data available for this study, it was necessary, in some cases, to utilize proxy variables. Although utilizing proxy variables tends to bias the model, it was felt that the possible bias created through the use of these proxy variables was, in most instances, less than the model bias created by exclusion. However, certain conceptual and empirical problems can arise by utilizing these surrogate measures. For example, variation exists in final output selling prices (P_y). It is obvious that the products manufactured and sold in the Pacific Northwest (Douglas-fir) Region (R6) are not necessarily technologically compatible with products of the Eastern (hardwood) Region (R9). However, it was assumed that variations in prices are highly correlated with basic price indices.

Potential variations in input prices in the manufacturing sector for labor and capital also introduce measurement problems. For example, even where the production output is essentially homogeneous (i.e. plywood production in the Pacific Northwest Region (R6) and the Southern Region (R8), it is probable that labor and capital markets are such that the prices of inputs are not necessarily the same. Furthermore, production technologies (production functions) are such that they could yield different derived demands for factor inputs even where labor markets were the same due to differing marginal productivity.

Similar reservations could also be raised in the logging sector. Surrogate measures would likely differ for factor inputs and prices in terms of both labor and capital markets and in terms of technologies where the harvesting techniques are substantially different. Nevertheless,

it was felt that potential problems arising from the use of aggregate proxy variables were justifiable when compared with the potential model bias created by excluding these variables in the model specification.

The derived demand schedule for stumpage was expressed as (Equation 12, page 23):

$$P_x = g(x, P_l, P_k, P_L, P_K, P_y) \qquad (12)$$

where; P_x represented stumpage price,

P_l, P_k represented the prices of labor and capital in the logging sector,

P_L, P_K represented the prices of labor and capital in the manufacturing sector,

P_y represented the price of final outputs, and

x represented the quantity of stumpage to be sold.

The model, as specified, attempts to estimate the demand function for Forest Service timber. Hence, P_x represents the average value sold (AVS) per MBF.[19]

The terms for prices of labor and capital for the logging sector require surrogate measures since no data was available which reflects each of these factor costs separately for local markets. Logging cost, which is estimated and utilized by the Forest Service in the timber appraisal process presumably reflects the P_l and P_k as specifically relevant to each of the study areas and the resulting technological production functions. In this case, a combined estimate of P_l and P_k was thus represented by logging costs (LOGCO). Similarly, no data was available which reflects P_L and P_K specific to the various study forests or regions.

[19]The definition of variables used in this study are given in Appendix 1.

Therefore, as a proxy measure for P_L, national gross weekly earnings in manufacturing (GWE), was utilized.

It was felt that since manufacturing plants in the wood products industries are relatively capital intensive, and since the market period used in this analysis is relatively short (quarterly), capital represented a short run fixed cost to the manufacturing sector and therefore would not enter into marginal decisions such as the quarterly demand for stumpage. No proxy variable was utilized to measure P_K and it was essentially dropped from the equation.

Where adequate data was available regarding the composition of mills in the market area for the study forests, a local weighted price index (WPI) was utilized as a proxy variable for P_y. The weighted price index was calculated by weighting the price indices of (a) pulp, paper, and allied products (PIPAP) and (b) Douglas-fir lumber (PIDFLB) by the percentage of total mill capacity (TCAPAC) included in SIC classification 24 (TCAP24) and 26 (TCAP26) respectively within the market area. That is:

$$WPI = \left(\frac{TCAP24}{TCAPAC}\right) PIDFLB + \left(\frac{TCAP26}{TCAPAC}\right) PIPAP$$

This surrogate measure of output price reflects more adequately actual price movements than would merely utilizing a single available price index in that it explicitly takes into account the mix of industries potentially purchasing Forest Service timber.

For study forests for which data regarding industrial mix in the local market areas was not available, other surrogate measures were necessary. Selection of such proxy variables was necessarily somewhat arbitrary. Nevertheless, since most of the possible proxy variables for P_y are highly correlated with each other, any bias in the demand model created by utilizing one proxy variable relative to another would likely not differ greatly.

The criteria utilized to select the proxy variable of P_y for these areas was to select the price index which represented the dominant output of timber industry in the market area. For the California Region (R-5) the price index for Douglas-fir lumber (PIDFLB) was utilized for P_y. For the Southern Region (R-8) the price index for paper and allied products (PIPAP) was utilized.[20]

The variable x (Quantity) in the demand equation as originally specified would reflect volume sold by National Forests (VOLSOLD). However, this introduced a possible model misspecification since the multi-year duration of most Forest Service timber sales contracts results in considerable volumes of National Forest timber that has previously been sold but is, as yet, still unharvested. Therefore, in terms of the derived demand for timber purchases, this uncut volume under sale contract (UVOLUC) may represent a significant factor influencing the quantity of National Forest timber currently demanded in a particular quarter in addition to the quantity of timber currently being sold by the Forest Service. Therefore, quantity can be explicitly represented as two components, VOLSOLD and UVOLUC, and are introduced as two separate variables in the demand equation. This product price-stumpage sales price relationship, however, may not necessarily be direct. This issue is discussed in some detail in a later section. In general, if it is assumed that current stumpage markets reflect future expected prices and consumption (or expected future demand), while harvest volumes and values reflect current stumpage demand, then the volume of uncut timber and its value may reflect an "inventory" component between the current stumpage sales market and future stumpage harvest market. Since in the ordinary least squares estimation procedure utilized the inclusion of irrelevant variables does not increase the bias of the model,[21]

[20] Selection of these proxy variables was not completely arbitrary in that the variable selected tended to reduce the residual sum of squares when compared to regressions utilizing alternative proxy variables.

[21] Ibid, Rao, pp.56-59

uncut volume under contract is included as an independent variable on the *a priori* premise that uncut inventory tempers the derived demand for current timber pruchases. With the division of the quantity variable into two separate variables, (VOLSOLD and UVOLUC) recognition must be given to the fact that UVOLUC has a "price" distinct from other price components that also must be included in specifying the estimation equation in order to have an unbiased estimate.

As a proxy variable for this price component of the demand model, a total weighted average value sold was calculated for timber sold during the previous four and eight fiscal quarters (TWAVS4 and TWAVS8). Weighting was on a volume sold basis. The selection of a four or eight quarter index was somewhat arbitrary. Consideration of all of the possible sources for variance in the value of uncut timber under sale contract was impossible. Given the average sale contract period and the time lag from sale to harvest, these weighted values are considered reasonable proxy measures. The choice between length of weighting to use for a specific region was determined by comparing the residual sums of squares of the regression equations for each forest in a region by including TWAVS8 and TWAVS4 in separate regression runs. Selection was based on the variable that tended to reduce the sum of squares (Appendix V).

Although the differences in these sums of squares is generally very small, TWAVS4 tends to result in smaller sums of squares for all regions except the Pacific Northwest Region (R6).

The variables and equations utilized to estimate the derived demand for National Forest timber are as follows:

Region	Forest	Model
1	03 Bitterroot	
	10 Flathead	
	14 Kookuai	$\ln(AVS) = B_o+B_1\ln(VOLSOLD)+B_2\ln(LOGCO)$
	16 Lolo	$+ B_3\ln(GWE)+B_4\ln(UVOLUC)$
2	06 Medicine Bow	$+B_5\ln(TWAVS4)+B_6\ln(WPI)$
	09 Rio Grande	
	11 Routt	
	13 San Juan	
9	03 Chippewa	
	04 Huron-Manistee	
	06 Nicolet	
6	03 Pinchot	
	05 Mt. Baker	$\ln(AVS) = B_o+B_1\ln(VOLSOLD)$
	06 Mt. Hood	$+B_2\ln(LOGCO) + B_3\ln(GWE)+$
	15 Umpqua	$B_4\ln(UVOLUC)+B_5\ln(TWAVS8)+B_6\ln(WPI)$
5	03 Eldorado	$\ln(AVS) = B_o+B_1\ln(VOLSOLD)+$
	15 Sierra	$B_2\ln(LOGCO)+B_3\ln(GWE)+$
	16 Stanislaus	$B_4\ln(UVOLUC)+B_5\ln(TWAVS4)+$
	17 Tahoe	$B_6\ln(PIDFLB)$
8	06 Kistachie	
	09 Ouachita	$\ln(AVS) = B_o+B_1\ln(VOLSOLD)+$
	10 Ozark-St. Francis	$B_2\ln(LOGCO)+B_3\ln(GWE)+$
	13 Texas	$B_4\ln(UVOLUC)+B_5\ln(TWAVS4)+$
9	10 Hiawatha	$B_6\ln(PIPAP)$

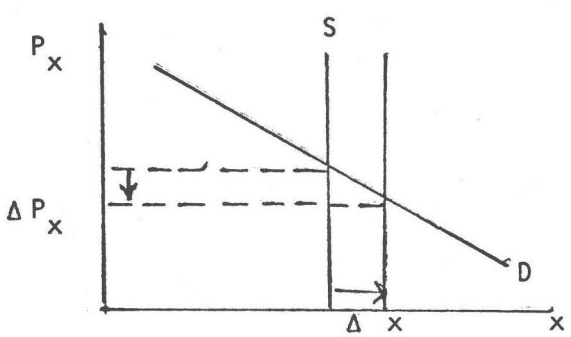
2. Signs of the coefficients: A priori restrictions and logic

Before examining the estimated coefficients, certain a priori restrictions as to the signs of these coefficients must be considered.

a) The price elasticity of demand $(\frac{1}{B_1})$

By definition, as discussed previously, B_1 is the inverse of the price elasticity of demand. Also, by definition, this must necessarily be negative. A positive price elasticity of demand would imply an upward sloping demand curve for National Forest timber, which is economically illogical since it would contradict the theoretical basis of the law of demand. This restriction is depicted in Figure 7.

Figure 7: Downward Sloping Demand and the Sign of Price Elasticity



$$\varepsilon_D = \frac{\% \Delta x}{\% \Delta P_x} \leq 0$$

That is, as the quantity of National Forest timber offered for sale during a specified time period increases the equilibrium market price must decrease or remain the same but not increase. The same restriction would obviously also hold where quantity decreases.

b) Logging costs (B_2) and manufacturing costs (B_3)

Debate exists in the literature as to the technological production functions in the logging and manufacturing sectors as to whether or not stumpage or logs, as a factor of production, are complements or substitutes relative to capital and labor. The expected sign of the B_2 and B_3 coefficients would be determined as to which technological

relationship is hypothesized. That is, one would expect the coefficient to be negative if logs, labor, and capacity are substitutable, and positive if they were complements. Mead , for example, in analyzing the price elasticity of the demand for logs by the manufacturing sector states:[22]

> "A very minor degree of substitution is possible between log input and labor input, and between log input and capital intensity. The possibility of greater capital intensity in response to higher log prices is limited to (1) a narrower saw kerf that would produce more lumber and less sawdust; (2) more precisely engineered saws to produce straighter cuts; the latter allowing reduced waste in the process of planing; and (3) a higher degree of utilization resulting from such innovations as end - or edge-gluing."

In terms of the possibility of greater labor intensity, Mead states[23]

> "While there is no doubt that slower production speed and more careful (labor-consuming) examination of raw materials the flow of "waste" material into the burner or chipper could be reduced in quantity, the present high degree of utilization does not permit significant further improvement."

Similar arguments could possibly be derived for the stumpage versus labor or capital intensity in the logging sector. Obviously this type of argument would imply that labor or capital are compliments with stumpage or logs in these production processes.

On the other hand, however, one could also make an argument that there is still ample room for improvement in utilization and therefore, at least within some range of production that labor and capital may be substitutes for logs or stumpage.

Without strong supporting empirical evidence to substantiate either of these arguments as to the complementarity or substitutability of logs

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[22] Walter J. Mead, Competition and Oligopsony in the Douglas-fir Lumber Industry, University of California Press, Berkeley and Los Angeles 1966, p.46.

[23] Mead, Ibid, p.48.

or stumpage in the manufacturing and logging sectors of each of the study forests, no a priori assumptions are made as to the expected signs of the B_2 and B_3 coefficients.

c) Uncut volume under contract (B_4) and the average value of uncut volume (B_5)

As stated previously, the uncut volume under sale contract (UVOLUC) may be viewed as an alternative source of National Forest timber to volume currently being offered for sale. In this light, uncut volume under sale contract would tend to be a substitute for volume offered for sale and therefore conceptually expected to have a negative coefficient.

The weighted average value of uncut volume under contract would necessarily be a reflection of prior bidding on National Forest timber sales. During periods of sustained rising stumpage prices, this weighted average value will likely be increasing. Timber added to uncut inventory will have a higher average value than that for timber purchased during the proceeding four or eight calendar quarters (TWAVS4 or TWAVS8). Similarly, during sustained periods of falling stumpage prices, incremental additions to uncut volume will be at a price lower than the weighted average of recent sales. In both cases, nevertheless, the two prices will move in the same direction. Hence, a positive coefficient is logically expected during periods of sustained price movements.

The relationship between current sales price and weighted average value of uncut volume is indeterminant when turning points in price trends are included in the time span over which the weighting is calculated. Timber operators have some discretion over which timber to harvest at any particular time. By removing timber from uncut inventory, they can effectively influence the weighted average value of residual uncut volume as well as the actual harvest value of timber removed. This influence is undetected when TWAVS4 or TWAVS8 is used as a proxy

for value of uncut volume under contract. In a fluctuating market, these price variables can logically move in different directions and hence a negative coefficient can be logically anticipated.

d) The price of final outputs (B_6)

An inferior factor of production is characterized by a decrease in its derived demand as final product selling price increases. Assuming that stumpage is not an inferior factor of production in the logging sector, and that logs are not an inferior factor of production in the manufacturing sector, the price of stumpage should be positively related to final product selling price. That is, B_6 should be positive.

The assumption that logs or stumpage are non-inferior factors of production should be unambiguous. It does not appear logical that either the manufacturing or logging sectors would demand less logs or stumpage at a given price level in response to increased output prices. That is, it does not seem reasonable that:

$$\frac{\partial x^*}{\partial P_x} < 0 \quad \text{for the logging sector, or that}$$

$$\frac{\partial x^*}{\partial P_y} < 0 \quad \text{for the manufacturing sector.}$$

3. Estimated coefficients of the demand for National Forest timber

The results of the estimated equations are tabulated in Table 2. With the exceptions of the Kootenai, Gifford Pinchot. Mt. Baker, Mt. Hood, and the Umpqua National Forests, none of the National Forests meet the *a priori* restriction of negative B_1 coefficients. This implies that there must necessarily be a misspecification of the derived demand model for National Forest timber since, as previously discussed, positive B_1 coefficients implies an upward sloping demand curve. Therefore, with this constraint, interpretation of both the B_1 coefficients as well as the other regression coefficients would be misleading, for all forests.

4. Model respecification to eliminate bias

a. Adjustment for time trends

Since the estimations were made using time series data, it was hypothesized that the model misspecification was the result of an omission of a time variable to account for a spurious "trend" factor between the variables. Hence, the model was respecified to include a quarterly time trend as an independent variable.

However, when a time trend factor was added to the derived demand model, only one additional B_1 coefficient (that of the Bitterroot National Forest) changed to the "correct" sign (Table 3). Nevertheless, since the adjusted multiple regression coefficient ($\bar{R}^2$) increased for most of the forests with the addition of the "trend" variable (see Table 4), the time component is not a superfluous variable and therefore was retained in the model specification as a variable in the estimated derived demand equations.

TABLE 2 : Coefficients of Estimated Derived Demand Equations for National Forest Timber

REGION	FOREST		B_o	B_1	B_2	B_3	B_4	B_5	B_6	R^2	$\bar{R}^2$	σ
1	03	Bitterroot	-8.925	+.025	+.888	+.120	+.386	+.116	+.776	.737	.699	.772
			(7.938)	(.078)	(.256)	(1.225)	(.361)	(.279)	(1.104)			
1	10	Flathead	+20.946	+.014	+1.036	-.247	-2.138	+.125	+1.445	.787	.756	.431
			(10.833)	(.050)	(.178)	(.801)	(.817)	(.234)	(1.079)			
1	14	Kootenai	+18.960	-.019	+.993	-1.251	-1.865	-.218	+2.969	.631	.577	.562
			(14.684)	(.055)	(.244)	(.955)	(1.191)	(.273)	(.915)			
1	16	Lolo	+1.672	+.106	+.152	-1.008	-.629	+.022	+2.036	.568	.505	.628
			(11.821)	(.064)	(.314)	(1.021)	(.579)	(.405)	(1.573)			
2	06	Medicine Bow	-16.366	+.175	+.057	+1.131	+.260	-.031	+1.637	.738	.699	.696
			(17.408)	(.058)	(.176)	(1.361)	(.761)	(.169)	(1.183)			
2	09	Rio Grande	-11.168	+.101	+.423	+.914	+.118	-.048	+1.144	.838	.815	.596
			(10.371)	(.093	(.276	(1.036)	(.576)	(.111)	(.731)			
2	11	Routt	-6.704	+.349	-.588	+.062	-.256	+.174	+1.886	.699	.655	.694
			(11.713)	(.059)	(.187)	(1.138)	(.891)	(.179)	(.944)			
2	13	San Juan	-62.015	+.039	+.521	+3.113	+2.648	+.051	+2.819	.633	.579	.687
			(17.517)	(.067)	(.220)	(1.462)	(.814)	(.187)	(.938)			
5	03	Eldorado	-16.915	+.169	+.469	+1.295	+.678	-.083	+.581	.691	.646	.595
			(13.708)	(.055)	(.238)	(1.053)	(.974	(.220)	(.750)			
5	15	Sierra	-11.709	+.126	+.379	-1.455	+.384	+.177	+2.832	.814	.787	.622
			(25.098)	(.041)	(.183)	(1.072)	(1.761)	(.179)	(.794)			
5	16	Stanislaus	+.360	+.032	+1.058	+.918	-.722	-.144	+.983	.831	.807	.603
			(10.205)	(.063)	(.295)	(1.089)	(.686)	(.219)	(.746)			
5	17	Tahoe	-5.753	+.161	+.112	-1.166	+.054	+.312	+2.266	.613	.556	.816
			(11.941)	(.071)	(.270)	(1.308)	(.984)	(.409)	(1.129)			
6	03	Pinchot	+4.161	-.033	-.491	+.248	-.807	-.111	+2.454	.854	.832	.226
			(5.268)	(.068)	(.278)	(.375)	(.370)	(.153)	(.396)			
6	05	Mt. Baker	-14.876	-.137	+1.228	-.816	+.982	+.431	+1.349	.671	.622	.381
			(9.162)	(.050)	(.561)	(.947)	(.556)	(.233)	(.531)			
6	06	Mt. Hood	+9.171	-.083	-.309	-.096	-.979	+.136	+2.004	.774	.740	.238
			(3.274)	(.033)	(.274)	(.455)	(.274)	(.176)	(.292)			
6	15	Umpqua	-.883	-.017	-1.175	+.076	-.462	+.238	+2.713	.653	.602	.423
			5.892	(.103)	(.528)	(.843)	(.462)	(.254)	(.501)			
8	06	Kistachie	+2.924	+.207	+.759	+.714	-.912	+1.092	+.017	.801	.772	.254
			(5.572)	(.067)	(.528)	(.532)	(.466)	(.348)	(1.304)			
8	09	Ouachita	+5.958	+.001	+1.584	-.391	-.133	+.637	+.121	.725	.685	.128
			(2.226)	(.040)	(.351)	(.251)	(.469)	(.145)	(.689)			
8	10	Ozark-St.Francis	-4.221	+.077	+1.080	+.931	-.071	+.449	+.010	.818	.791	.327
			(3.328)	(.068)	(.232)	(.476)	(.285)	(.349)	(.083)			
8	13	Texas	-2.869	+.047	+.148	+.758	-.218	+.298	+.747	.695	.650	.204
			(3.164)	(.033)	(.330)	(.345)	(.226)	(.243)	(1.109)			
9	03	Chippewa	-15.040	+.147	+.043	+1.007	+.563	-1.004	+1 256	.634	.581	.540
			(4.079)	(.039)	(.251)	(1.134)	(.723)	(.354)	(1.648			
9	04	Huron Manistee	-21.951	+.121	+.082	-.252	+1.149	-.086	+2.037	.761	.726	.349
			(11.364)	(.023)	(.135)	(.569)	(1.096)	(.417)	(1.198)			
9	06	Nicolet	-8.707	+.236	-.024	+.526	+.269	-.017	+.703	.862	.841	.331
			(10.846)	(.025)	(.129)	(.581)	(.914)	(.382)	(.757)			
9	10	Hiawatha	+6.443	+.222	+.224	+.431	-.833	-.106	+.199	.658	.607	.515
			(7.420)	(.037)	(.136)	(.796)	(.975)	(.356)	(2.022)			

Table 3: Coefficients of Estimated Derived Demand Equations for National Forest Timber Adjusted for Time Trends.

Region			B'_0	B'_1	B'_2	B'_3	B'_4	B'_5	B'_6	B'_7	R^2	$\bar{R}^2$	σ
1	03	Bitterroot	+3706.685	-.030	+1.018	+1.990	+.627	-.111	+2.599	-492.468	.759	.716	.750
			(2169.676)	(.083)	(.260)	(1.615)	(.378)	(.302)	(1.511)	(287.568)			
	10	Flathead	+134.803	+.012	+1.040	-.225	-2.073	+.121	+1.528	-15.184	.787	.748	.437
			(2172.063)	(.055)	(.194)	(.921)	(1.495)	(.253)	(1.932)	(289.661)			
	14	Kootenai	+3780.524	-.058	+1.098	+.243	-.187	-.224	+3.942	-500.621	.685	.628	.527
			(1603.957)	(.054)	(.233)	(1.099)	(1.327)	(.256)	(1.039)	(213.460)			
	16	Lolo	+3060.801	+.071	+.280	+.250	+.012	-.227	+4.665	-406.385	.595	.522	.617
			(2098.454)	(.068)	(.320)	(1.324)	(.720)	(.433)	(2.081)	(278.761)			
2	06	Medicine Bow	+4353.669	+.168	+.061	+3.381	+.185	-.053	+3.159	-578.403	.79;	.753	.630
			(1320.572)	(.052)	(.159)	(1.460)	(.689)	(.153)	(1.194)	(201.247)			
	09	Rio Grande	+2088.016	+.119	+.361	+1.884	+.002	-.004	+1.791	-277.612	.848	.820	.587
			(1484.147)	(.092)	(.276)	(1.230)	(.574)	(.114)	(.853)	(196.270)			
	11	Routt	+6166.580	+.317	-.488	+2.771	-1.754	-.124	+4.738	-815.101	.782	.743	.599
			(1768.072)	(.052)	(.164)	(1.252)	(.881)	(.177)	(1.155)	(233.447)			
	13	San Juan	-577.397	+.038	+.521	+3.122	+2.852	+.039	+2.781	+67.630	.633	.566	.698
			(8693.042)	(.068)	(.224)	(1.486)	(2.036)	(.218)	(1.014)	(615.831)			
5	03	Edlorado	+1097.470	+.170	+.452	+1.801	+.626	-.037	+.931	-147.393	.696	.641	.599
			(1491.601)	(.055)	(.241)	(1.258)	(.983)	(.230)	(.889)	(197.276)			
	15	Sierra	+7064.139	+.118	+.359	+1.188	-4.224	+.285	+4.973	-928.195	.899	.881	.464
			(1359.356)	(.031)	(.137)	(.948)	(1.586)	(.136)	(.722)	(178.301)			
	16	Stanislaus	+2847.639	+.056	+.961	+2.043	-1.441	+.021	+1.858	-375.531	.842	.813	.594
			(1975.001)	(.064)	(.298)	(1.326)	(.839)	(.244)	(.953)	(260.482)			
	17	Tahoe	+5545.677	+.157	+.191	+1.228	+1.630	+.272	+4.197	-737.316	.671	.612	.763
			(2320.809)	(.067)	(.254)	(1.581)	(1.132)	(.383)	(1.330)	(308.236)			
6	03	Pinchot	+2347.369	-.039	-.475	+1.212	-.183	+.326	+3.015	-311.233	.892	.873	.196
			(687.087)	(.060)	(.242)	(.432)	(.370)	(.185)	(.381)	(91.259)			
	05	Mt. Baker	+2981.359	-.139	+.738	+1.104	+.422	+.508	+2.197	-395.699	.753	.709	.334
			(911.293)	(.044)	(.515)	(1.016)	(.517)	(.206)	(.533)	(120.346)			
	06	Mt. Hood	+2253.858	-.067	-.178	+.723	-.444	+.483	+2.484	-297.953	.827	.795	.211
			(718.424)	(.030)	(.247)	(.482)	(.298)	(.192)	(.302)	(95.427)			
	15	Umpqua	+2631.861	-.003	-.924	+.793	-.073	+.595	+3.440	-349.011	.687	.630	.408
			(1414.777)	(.100)	(.527)	(.912)	(.492)	(.311)	(.622)	(187.549)			
8	06	Kistachie	-4471.046	+.167	+.413	+.383	-2.108	+.388	-.414	+592.705	.836	.806	.235
			(1718.973)	(.064)	(.505)	(.507)	(.629)	(.420)	(1.215)	(227.708)			
	09	Ouachita	+974.161	+.029	+1.697	+.413	-.074	+.664	-.259	-128.510	.767	.724	.120
			(405.385)	(.040)	(.331)	(.257)	(.050)	(.136)	(.739)	(53.806)			
	10	Ozark-St. Francis	-428.102	+.080	+1.078	+.690	-.046	-.091	+.008	+56.059	.820	.787	.331
			(794.285)	(.069)	(.235)	(.659)	(.292)	(.435)	(.084)	(105.044)			
	13	Texas	492.366	+.048	+.021	+.968	-.228	+.354	+1.395	-65.794	.700	.645	.206
			(650.881)	(.033)	(.372)	(.445)	(.227)	(.255)	(1.404)	(86.471)			
9	03	Chippewa	-5094.795	+.112	-.026	-.561	+.246	-1.382	-1.475	+673.048	.742	.695	.460
			(1391.253)	(.035)	(.215)	(1.059)	(.623)	(.319)	(1.593)	(188.335)			
	04	Huron-Manistee	+172.959	+.120	+.082	-.177	+1.241	-.090	+2.200	-25.991	.762	.718	.355
			(1094.162)	(.023)	(.137)	(.715)	(1.227)	(.424)	(1.520)	(145.897)			
	06	Nicolet	+2348.412	+.224	+.024	+1.262	+1.182	+.654	+2.089	-313.544	.876	.853	.318
			(1232.205)	(.025)	(.127)	(.679)	(1.001)	(.370)	(1.027)	(163.902)			
	10	Hiawatha	+1239.531	+.223	+.230	+.992	-.909	+.061	+1.487	-163.650	.662	.601	.519
			(1840.305)	(.037)	(.138)	(1.160)	(.990)	(.437)	(2.803)	(244.235)			

TABLE 4:

Change in $\bar{R}^2$ with the addition of time as an independent variable

Region	Forest	$\bar{R}^2$ without time	$\bar{R}^2$ with time	$\Delta \bar{R}^2$
1	03	.699	.716	+.017
	10	.756	.748	-.008
	14	.577	.628	+.051
	16	.505	.522	+.017
2	06	.699	.753	+.054
	09	.815	.820	+.005
	11	.655	.743	+.088
	13	.579	.566	-.013
5	03	.646	.641	-.005
	15	.787	.811	+.094
	16	.807	.813	+.006
	17	.556	.612	+.056
6	03	.832	.873	+.041
	05	.622	.709	+.087
	06	.740	.795	+.055
	15	.602	.630	+.028
8	06	.772	.806	+.034
	09	.685	.724	+.039
	10	.791	.787	-.004
	13	.650	.645	-.005
9	03	.581	.695	+.014
	04	.726	.718	-.008
	06	.841	.853	+.012
	10	.607	.601	-.006

Nevertheless, the remaining large number of positive B_1 coefficients still necessarily implies a model misspecification and hence biased estimates of regression coefficients. For example, if one were to transform the B_1 coefficients of the original demand model and the B_1' coefficients of the "trend" adjusted demand model into traditional price elasticities of demand, one would conclude that with the former model, the elasticities ranged from -58.8 on the Umpqua National Forest to +1000 on the Ouachita National Forest. With the time adjusted model the implicit elasticities would range from -333.3 on the Umpqua National Forest to +83.3 on the Flathead National Forest (Table 5).

Table 5 : Implicit Price Elasticities of Demand for National Forest Timber based on Misspecified Demand Models

		Model Specification			
		No Time Trend		Time Variable Correction	
		B_1	ε_D	B_1'	ε'_D
Region	Forest				
1	03	+.025	+40.0	-.030	- 33.3
	10	+.014	+71.4	+.012	+ 83.3
	14	-.019	-52.6	-.058	- 17.2
	16	+.106	+ 9.4	+.071	+ 14.1
2	06	+.175	+ 5.7	+.168	+ 6.0
	09	+.101	+ 9.9	+.119	+ 8.4
	11	+.349	+ 2.9	+.317	+ 3.2
	13	+.039	+25.7	+.038	+ 26.3
5	03	+.169	+ 5.9	+.170	+ 5.9
	15	+.126	+ 7.9	+.118	+ 8.5
	16	+.032	+31.3	+.056	+ 17.9
	17	+.161	+ 6.2	+.157	+ 6.4
6	03	-.033	-30.3	-.039	- 25.6
	05	-.138	- 7.2	-.139	- 7.2
	06	-.083	-12.0	-.067	- 14.2
	15	-.017	-58.8	-.003	-333.3
8	06	+.207	+ 4.8	+.167	+ 6.0
	09	+.001	+1000.	+.029	+ 34.5
	10	+.077	+13.0	+.080	+ 12.5
	13	+.047	+21.3	+.048	+ 20.8
9	03	+.147	+ 6.8	+.112	+ 8.9
	04	+.121	+ 8.3	+.120	+ 8.3
	06	+.236	+ 4.2	+.224	+ 4.5
	10	+.222	+ 4.5	+.223	+ 4.5

b. Adjustment for "other" sources of timber.

Reexamination of the model indicated that an obvious variable that should be specified in the estimated demand equation (that was implicit in the conceptual derived demand model) is the quantity of timber derived from sources other than the study National Forest. This may be viewed as a third component of total quantity supplied (x) in the conceptual model. Therefore, implicitly in the conceptual derived demand model

$$x = x' + x'' + x'''$$

where

x' = quantity supplied by study National Forests

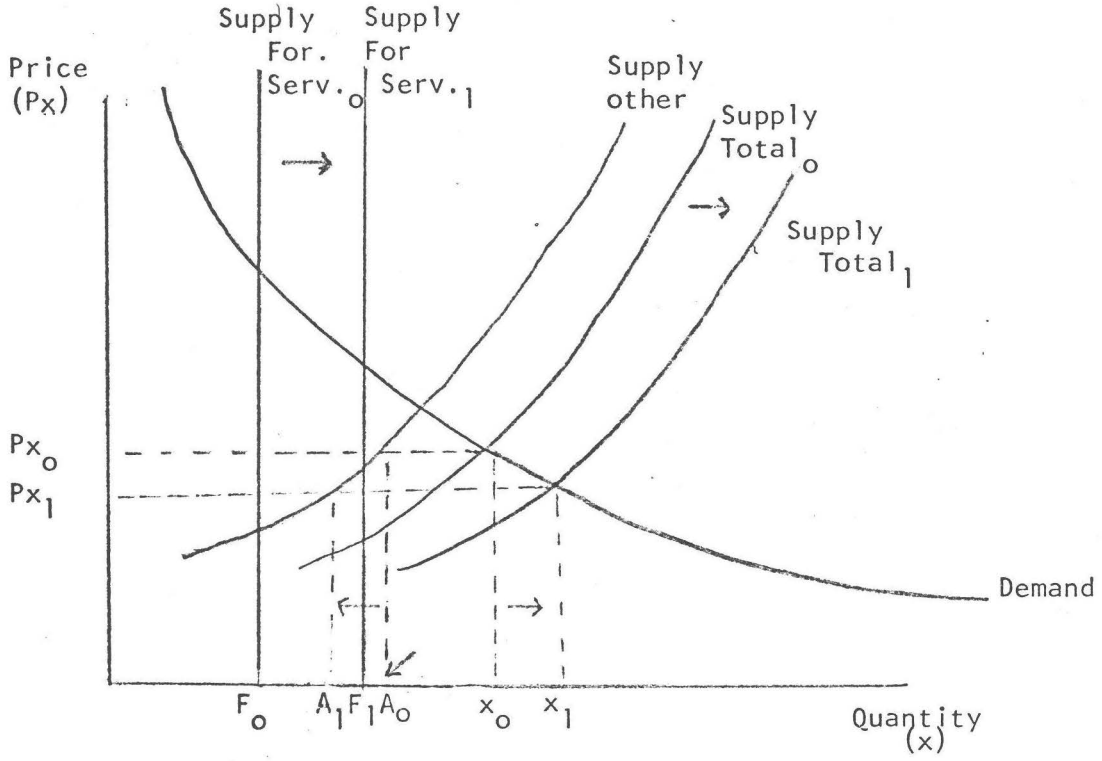
x'' = uncut volume under sale contract from study National Forests

x''' = "other"sources of timber supply including other National Forests supplying the market area, other public timber supplies and private timber supplies.

Assuming (for purpose of illustration only) that the "other" sources of timber supply include a price responsive private timber quantity (x''') and ignoring for the moment uncut volumes under sale contract (x''), the results of bias in the estimates caused by omitting x''' from the estimated demand equation are depicted in Figure 8.

Figure 8

Estimation Bias from Omitting "Other" Timber Quantity in Demand Specification



Initial equilibrium conditions would be established between total timber demand and supply at price Px_0 and quantity x_0. At this price, quantity F_o will be sold by the Forest Service while quantity A_o will be supplied by "all other" sources. By attempting to define a demand function for National Forest timber only, the measure of quantity would be F_o while total market consumption is obviously x_0.

In considering the implications for estimating elasticity of demand, the effects of a change in National Forest sales volume can be observed. If National Forest sales volume increases from F_o to F_1 a series of market adjustments occur whereby a new equilibrium is reached with total consumption at quantity x_1 and price Px_1. Quantity A_1 will now be forthcoming from "all other" sources at the lower price. Thus, the observed price change ($Px_0 - Px_1$) is erroneously associated with the change in Forest Service volume ($F_1 - F_o$) rather than the change in

total consumption $(x_1 - x_0)$. It is apparent that the change in consumption $(x_1 - x_0)$ is less than the change in Forest Service sales $(F_1 - F_o)$ since the change in volume from "all other" sources $(A_1 - A_o)$ is necessarily negative. The consequence of this bias will be to understate the elasticity of demand (or overstate the value of B_1).

The biased estimation model expressed the B_1' coefficient as

$$B_1' = \frac{\partial \ln Px}{\partial \ln x'} \Bigg| \bar{x}'', \text{ceteris paribus}$$

whereas an unbiased estimate, taking possible fluctuations of private supplies into account, would express B_1'' as

$$B_1'' = \frac{\partial \ln Px}{\partial \ln x'} \Bigg| \bar{x}'', \bar{x}''', \text{ceteris paribus.}$$

The reason for the omission of this variable from the demand equation is that data on "all other" (private and non-National Forest) timber harvests, which constitutes a variable proportion of the quantity of timber available to satisfy demand in most of the study National Forest market areas was not available in usable form. (See Appendix IV.)

The only market areas where time series data reflecting non-National Forest timber harvest is available in the Pacific Northwest region (R-6).[24] This data is estimated at the county and state level (Washington and Oregon) on an annual basis. Even such data had little value to this analysis without seriously restrictive assumptions relative to the distribution of these supplies on a quarter-by-quarter basis.

An attempt to overcome this model misspecification was attempted. The study National Forests were requested (through the Regional Offices) to provide quarterly estimates of the dependency of the mills in the

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[24] U.S.D.A., Forest Service, "Oregon Timber Harvest" and "Washington Timber Harvest" Annual Series, Research Bulletin, Pacific Northwest Forest & Range Experiment Station, Portland, OR

market area on timber from the designated forest as well as on other National Forests (see Data Collection Section III). The estimates of this dependency are summarized in Table 6.

Given valid estimates of dependency expressed as the quarterly percent of total timber processed by the mills in the market area of timber originating from National Forests, the total volume of timber and volume of timber supplied by other sources could be approximated. That is:

$$VOLSOLD = (DEPSTU)\ (VOLSOT)$$

where

VOLSOT = total volume sold

VOLSOLD = National Forest volume sold

DEPSTU = Dependency on National Forest Unit expressed as a decimal

thus:

$$VOLSOT = \frac{VOLSOLD}{DEPSTU}$$

hence:

$$VOLSOP = VOLSOT - VOLSOLD$$

$$= (VOLSOLD)\ \left[\ \frac{1}{DEPSTU}\ \right] - VOLSOLD$$

$$= (VOLSOLD)\ \left[\ \frac{1}{DEPSTU} - 1\ \right]$$

where VOLSOP = Non-National Forest volume sold

Although percent dependency estimates would realistically be based upon actual mill consumption of timber and therefore related more directly to timber harvest, whereas volume sold by National Forests [and total volume sold] would reflect sales, this approach to estimating total timber sales (VOLSOT) and "other" timber volume (VOLSOP) provided the only reasonable alternative given the scope of this study. However, of those National Forests submitting

Table 6

Summary of Dependency on Study Forest for Timber

Region	Forest		Data Availability
1	03	Bitterroot	One Estimate (1973)
	10	Flathead	" " (1973)
	14	Kootenai	" " (1973)
	16	Lolo	" " (1973)
2	06	Medicine Bow	Annual Estimate
	09	Rio Grande	" "
	11	Routt	Quarterly Estimate
	13	San Juan	Annual Estimate
5	03	Eldorado	No Estimate
	15	Sierra	" "
	16	Stanislaus	" "
	17	Tahoe	" "
6	03	Pinchot	Annual Estimate (incomplete series)
	05	Mt. Baker	" "
	16	Mt. Hood	" "
	15	Umpqua	" "
8	06	Kistachie	No Estimate
	09	Ouachita	" "
	10	Ozark	" "
	13	Texas	" "
9	03	Chippewa	One Estimate (1973)
	04	Huron-Manistee	Annual Estimate
	06	Nicolet	Quarterly Estimate
	10	Hiawatha	No Estimate

estimates of mills depending on National Forest timber, only two (Routt National Forest and the Nicolet National Forest) were able to supply quarterly estimates.

An adjusted model specification for the estimated demand equations was defined for the Routt National Forest and the Nicolet National Forest for which dependency values were complete. The results are depicted in Table 7. As was the case in the previous estimation model (Tables 2 and 3), however, the sign of the B_1'' coefficients remained positive implying an upward sloping demand curve for National Forest timber and, consequently, a model misspecification.

As can be seen in Table 8, when the B_1 coefficients and corresponding estimated price elasticities of demand from this modified model are compared with the model including only the time adjustment, the coefficients and elasticities change very little. This would tend to question the accuracy of the dependency estimates and thus the adequacy of the modification of the model to remove bias.

As shown in Table 5, 18 of the 24 study forests resulted in positive estimates of B_1' and thus positive estimates of price elasticity of demand (ε_D'). Such restulting estimates of positive values for B_1', however, does not statistically infer that the true parameter B_1' (and thus ε_D') value is non-negative. A test of the null hypothesis H: $B_1' > 0$ was conducted to determine the significance of the positive sign of the coefficients. It is noted in Table 9 that even with a biased estimation model (adjusted for time "trends") of the eighteen forests with seemingly positive price elasticities of demand, a test of the null hypothesis that price elasticity of demand is greater than zero ($B_1' > 0$) could not be rejected for ten of these forests with a probability of a type 1 error of 1%. This implies that a 99 percent confidence interval on the estimate of the B_1 coefficient could include zero or negative values.

Table 7 : Coefficients of Estimated Derived Demand Equations for National Forest Timber Adjusted for Time Trends and Estimates of Alternative Timber Supplies.

REGION	FOREST	B''_0	B''_1	B''_2	B''_3	B''_4	B''_5	B''_6	B''_7	R^2	R^{-2}	σ
2	11 Routt	+6199.113	+.317	-.487	+2.767	-1.756	-.125	+4.738	-819.388	.782	.743	.599
		(1766.616)	(.052)	(.164)	(1.252)	(.881)	(.176)	(1.154)	(233.256)			
9	06 Nicolet	+2332.655	+.225	+.019	+1.302	+1.164	+.066	+2.003	-311.414	.878	.855	.316
		(1224.495)	(.025)	(.126)	(.674)	(.994)	(.368)	(1.021)	(162.878)			

Table 8: Implicit Price Elasticities of Demand for National Forest Timber

Adjusted Models

Region	Forest	Model Specification			
		Adjusted for Time only		Adjusted for Time and Alternative Supplies	
		B_1	ε'_D	B''_1	ε''_D
2	11 Routt	+.317	+3.2	+.317	+3.2
9	06 Nicolet	+.224	+4.5	+.225	+4.4

Table 9 : Test of Hypothesis That Demand is Infinately Price Elastic Utilizing Time Adjusted Estimation Model.

		B_1'	t_o	Test Results 5%	1%
1	Bitterroot	-.030	- .361		
	Flathead	+.012	.231		
	Kootenai	-.058	-1.071		
	Lolo	+.071	1.047		
2	Medicine Bow	+.168	3.210	Reject	Reject
	Rio Grande	+.119	1.292		
	Boutt	+.317	6.136	Reject	Reject
	San Juan	+.038	.550		
5	Eldorado	+.170	3.091	Reject	Reject
	Sierra	+.118	3.845	Reject	Reject
	Stanislaus	+.056	.869		
	Tahoe	+.157	2.343	Reject	
6	Pinchot	-.039	- .652		
	Mt. Baker	-.139	-3.192		
	Mt. Hood	-.067	-2.243		
	Umpqua	-.003	- .034		
8	Kistachie	+.167	2.620	Reject	
	Ouachita	+.029	.739		
	Ozark-St. Francis	+.080	1.162		
	Texas	+.048	1.450		
9	Chippewa	+.112	3.212	Reject	Reject
	Huron-Manistee	+.120	5.201	Reject	Reject
	Nicolet	+.224	9.006	Reject	Reject
	Hiawatha	+.223	6.014	Reject	Reject

df = 32

t_c = 2.457 @ 1%
= 1.697 @ 5%

III. Timber Sales Receipt Model

A. Model Formulation

In contrast to the demand estimation model, where unbiased estimates of regression coefficients were of major concern, the second study objective involves estimation of a timber harvest receipts model with minimum variance. It may be recalled that timber harvest was conceptually envisioned as the decision to remove previously purchased but uncut timber inventory in preference to holding that timber for future periods.

Timber receipts in any given period is the product of the physical volume of timber harvested and the average bid price (adjusted) previously contracted for that timber. Harvest volume may vary between zero and the total uncut volume under contract (UVOLUC). Negative harvests and/or harvests greater than uncut inventory are obviously impossible.

Since National Forest timber is generally paid for as cut, it is necescarily the harvest sector of the stumpage market that determines timber receipts. Although current sales are important with respect to the incremental additions to uncut volume and the average value of timber under contract, harvest volume - and hence receipts - are more correctly related to uncut inventory acquired via prior timber sales. In the present analysis, the timber receipts model is structured as two equations, with Average Value Harvested (AVH) and Volume Harvested (VOLHARV) as the dependent variables.

1) Volume Harvested

As would be expected, the volume of timber harvested from National Forest units follows a close seasonal pattern. Seasonal weather patterns and production cycles for wood products (closely related to construction markets) determine, in part, the seasonal fluctuations in the volume harvested variable. Therefore, the seasonal dummy variables (D1 and D2) were incorporated into the volume harvested equation.

A closely related variable, in the sense that it tends to reflect seasonal fluctuations, is the volume harvested four quarters previously (VOLHA4). In addition to reflecting seasonality, however, VOLHA4 also reflects the "baseline" level of harvest activity for a particular calendar quarter based on that same quarter the previous year (in terms of volume) that may be expected.

As was previously discussed, uncut volume under sale contract (UVOLUC), represents a direct linkage between the sales sector and the harvest sector of the model. In this sense, UVOLUC reflects an inventory of potential harvests and is therefore included in the equation. Also, to complete the linkage, VOLSOLD was included as it directly reflects additions to the UVOLUC. By including both of these variables in the VOLHARV estimation equation (UVOLUC and VOLSOLD), it was felt that this sales sector - harvest sector linkage would be properly accounted for.

In addition to the seasonality of harvest operations, and consideration of volume availability, the decision as to present harvest volume is also dependent upon the relative values of the inputs and outputs of the harvest subsector. To account for the value of inputs, the weighted average value of sales during the previous four quarters (TWAVS4) was utilized as a proxy measure.[25] In essence, this measures the relative

[25]This was also utilized in the demand model formulation. See discussion, section IIB page 33.

weighted value of the uncut volume under contract (UVOLUC) and can be viewed as an "average" price of inventory available for harvest.

As a measure of the relative value of outputs, in lieu of utilizing separate value indicators for each forest or region (as was done for the demand model), and in lieu of attempting to formulate one estimate of the output value applicable to all of the study forest,[26] consideration was given to measuring the possible "level of activity" in the output market. Therefore, monthly total housing starts lagged one quarter (MTOTHS1) was utilized as a proxy measure for the "level of activity" in the output market. Also, to account for time "trends" in the variables utilized, time was included as an independent variable in the estimation equation.

Therefore, the volume harvested prediction model may be specified as:

$$VOLHARV = \alpha_o + \alpha_1\ UVOLUC + \alpha_2\ VOLSOLD + \alpha_3\ MTOTHS1 + \alpha_4\ VOLHA4 + \alpha_5\ D1 + \alpha_6\ D2 + \alpha_7\ TIME + \alpha_8\ TWAVS4$$

2) Average Value Harvested

As would be expected, the average value of timber harvested (AVH) from National Forest units is dependent in part upon those variables effecting the value of the inventory available for harvest (UVOLUC). Since stumpage price adjustment procedures, including stumpage rate escalation and rate redetermination directly effect the value of inventory, and since each (or both) procedure is used fairly extensively on most of the study forests, variables reflecting these effects were incorporated into the AVH model.

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[26] For a discussion of the problems involved in attempting to do this, see section IIB, page 31.

Detailed information as to the lag effect between stumpage rate adjustments and the harvest decision is not available. A four quarter lag was selected for this model on the basis of preliminary analysis of alternative lag assumptions involving rate redetermination and rate escalation. Therefore, the volumes of timber sold subject to stumpage rate escalation four quarters previously (ESCVOL4) and the volume of timber sold subject to rate redetermination four quarters previously (RRVOL4) were incorporated into the AVH equation.

Also, as previously discussed, TWAVS4 was included in the estimation model directly effecting the value of uncut inventory. Similarly, the value of inventory previously harvested also directly effects the value of the remaining inventory available for current harvest. Therefore, as a proxy measure for this inventory depleation value, total weighted average value harvested over the last four quarters (TWAVH4) was utilized.

As was the case in the volume harvested model, D1, D2 and TIME were included to account for the variations in average value harvested due to seasonality and general time "trends" between the variables.

The price index of industrial materials (PIMAT) and corporate AAA interest rates lagged four quarters (AAA4) were incorporated into the models as proxy measures for the "level of activity" in output markets.[27] In this sense, PIMAT may be viewed as a proxy measure for the "level of activity" in output markets for materials that may be either compliments or substitutes for the outputs of the wood products industries.

Therefore, the average value harvested prediction model may be specified as:

$$AVH = \alpha_0 + \alpha_1 \text{ TWAVS4} + \alpha_2 \text{ TWAVH4} + \alpha_3 D1 + \alpha_4 D2 + \alpha_5 \text{ TIME} + \alpha_6 \text{ AAA4} + \alpha_7 \text{ PIMAT} + \alpha_8 \text{ ESVOL4} + \alpha_9 \text{ RRVOL4}$$

[27] The variables AAA4 and MTOTHS1 are closely correlated. This is as would be expected in that interest rates effect the amount of money available for home construction and thus directly effect the housing industry activity with a time lag.

3) The order of variable entry

Volume Harvested

The specification of the estimating equations for Volume Harvested is summarized in Table 10. Independent variables are indicated in the sequence with which each entered the multiple regression equation using a sequential stepwise procedure.[28] It is interesting to note the general order of entry of the variables into each of the prediction equations. With respect to volume harvested, the dominant independent variable was VOLHA4, or the volume harvested the same calendar quarter the previous year. This obviously indicates the seasonal nature of most timber harvesting operations as well as the general base level of production. However, this variable was less influential for Region 6, where the dominant independent variable was D2, indicating the fourth fiscal quarter or the clear dominance of spring startup of logging in the Pacific Northwest to replenish mill inventories.

Volume harvested also shows a close relationship to monthly housing starts (MTOTHS1) lagged one quarter, although the influence of this variable is not as dominant or consistent between forests and regions.

Surprisingly, perhaps, neither uncut volume under contract (UVOLUC) nor weighted average value sold (TWAVH4) were significant indicators of volume harvested. This tends to indicate that both incremental (quarterly) adjustments of inventory volume and value are of less importance in the harvesting decision than market factors. Also, the quarterly adjustments can reasonably be assumed to reflect activity within a broader annual management perspective and thus of less importance for short-run decision-

[28] Stepwise Regression Model of the Statistical Package for Social Sciences (SPSS) was used. See Nie, Norman H., Statistical Package for the Social Sciences, McGraw-Hill Book Company, New York, 1975.

TABLE 10: Volume Harvested Model: Sequence of Variable Entry, Closeness of Fit and Error of Estimation

REGION	R1				R2				R5				R6				R8				R9			
FOREST	03	10	14	16	06	09	11	13	03	15	16	17	03	05	06	15	06	09	10	13	03	04	06	10
D1	*	2	2	2	4	4	4	2	5	5	6	2	5	6	5	5	8	4	7	7	4	7	5	*
D2	7	3	3	1	3	3	5	3	2	2	4	1	1	2	1	1	2	5	4	1	7	4	2	7
UVOLUC	5	8	5	3	7	8	6	6	6	6	7	3	3	3	3	7	4	8	1	6	5	5	8	5
VOLSOLD	6	4	4	5	5	2	*	8	8	4	5	*	2	7	8	*	3	2	3	3	3	8	7	1
MTOTHS1	2	7	8	7	2	7	7	4	3	3	3	5	6	4	2	3	5	3	*	4	*	3	4	4
TIME	3	6	6	4	6	5	2	5	4	7	8	6	4	5	6	2	7	7	6	2	1	6	1	6
VOLHA4	1	1	1	8	1	1	1	1	1	1	1	*	8	1	4	6	6	1	2	*	2	1	3	3
TWAVS4	4	5	7	6	8	6	3	7	7	*	2	4	7	8	7	4	1	6	5	5	6	2	6	2
R^2	.18	.82	.82	.40	.83	.73	.87	.62	.76	.71	.66	.40	.78	.80	.81	.52	.52	.61	.34	.46	.45	.48	.38	.55
a	7971.15	7105.87	7839.90	8228.44	2084.36	1783.95	2039.75	5146.38	12110.67	5691.83	11955.49	8584.06	27116.62	12175.19	21062.16	29677.35	7628.65	6388.51	2277.90	5747.03	2656.55	5307.01	3390.45	1686.05

*Statistically insignificant to stepwise regression and therefore not entered into equation.

TABLE 11: Average Value Harvested Model: Sequence of Variable Entry, Closeness of Fit, and Error of Estimation

REGION	R1				R2				R5				R6				R8				R9			
FOREST	03	10	14	16	06	09	11	13	03	15	16	17	03	05	06	15	06	09	10	13	03	04	06	10
D1	6	4	3	3	7	6	5	4	2	2	8	2	3	6	4	6	*	6	5	4	7	2	6	3
D2	5	3	7	9	8	4	4	7	5	4	3	4	2	4	3	5	6	2	6	5	3	4	7	7
ESCVOL4	8	5	2	4	3	9	8	8	8	7	6	*	5	2	9	9	*	*	*	*	*	*	*	*
TWASVS4	1	6	5	8	4	2	1	5	9	3	1	3	4	1	6	3	1	4	1	7	6	3	2	2
AAA4	9	8	8	7	6	7	2	9	3	6	9	8	6	3	5	7	3	*	3	6	2	1	1	1
TIME	2	1	1	5	2	3	6	1	1	*	2	1	1	*	7	1	2	3	2	1	5	*	5	6
PIMAT	4	7	4	2	5	8	3	3	6	5	4	7	8	5	2	8	4	5	4	3	4	6	3	5
RRVOL4	7	*	6	1	9	5	7	2	4	*	7	5	9	7	8	2	*	*	*	*	*	*	*	*
TWAVH4	3	2	9	6	1	1	*	6	7	1	5	6	7	8	1	4	5	1	7	2	1	5	4	4
R^2	.84	.64	.81	.36	.77	.63	.31	.76	.79	.76	.88	.82	.90	.86	.91	.78	.88	.68	.78	.71	.58	.57	.69	.84
σ	9.03	8.82	6.41	79.19	6.03	8.47	5.39	4.47	8.69	5.69	8.60	6.79	6.45	5.76	4.96	5.89	4.50	3.23	4.08	9.10	2.04	1.11	2.05	1.80

*Statistically insignificant to stepwise regression and therefore not entered into equation.

making.

Average Value Harvested

The specification of estimating equations for Average Value Harvested is summarized in Table 11. As would be expected, the average value of timber harvested (AVH) demonstrated a strong time influence, with a lesser role for short term or quarterly variation (D1 and D2). Since the value of harvest is largely determined by the bid price of uncut timber under contract, the weighted average value of timber sold during the previous year (TWAVS4) as well as price adjustments (where used regularly) are closely correlated with AVH. Price adjustments were measured by the volume of timber sold subject to price escalation (ESCVOL4) and rate redetermination (RRVOL4) with a one year lag.

Market factors, surprisingly, were not a major explanatory variable for AVH with the exception of Region 9 where the interest rate lagged one year (AAA4) was highly significant. The price index of industrial materials (PIMAT) was generally of low explanatory power indicating perhaps that harvest decisions are not changed significantly on the basis of current market conditions.

B. Model Results and Discussion

1. Pooling Forests

As previously discussed (page 7), the original study plan for this analysis called for the utilization of four study forests from each of the six regions whereby, in determining the timber sales receipts models, three of the forests' data would be "pooled" to formulate the model to be tested utilizing the data from the fourth forest. An implicit assumption of this "pooling" of forest data, however, is that forests are homogeneous within a region.

In fact, when the study forests were selected, forest homogeneity was the paramount criteria. This assumption, however, proved to be erroneous. Initial testing of the "pooled" regression equations for Region 6, using the Mt. Baker National Forest as the test forest, indicated that homogeneity was in fact not present. When the variables from each of the four forests within a region were subsequently compared by utilizing a paired t-test procedure, heterogeneity appeared to predominate for most of the independent variables. That is, with the null hypothesis being that the means of the distributions of the data for each variable on a pairwise comparison of forests were equal ($\mu_1 = \mu_2$), and the alternative hypothesis being that they are not equal, the test results were predominately to reject the null hypothesis with a probability of a type I error of 5% and 1%.[29]

In view of these test results, it was believed that "pooling" forest data would lead to the formulation of equations of dubious value in terms of the model objectives. As a consequence, "pooling" was not undertaken and separate equations were estimated for each study forest.

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[29] For test results, see appendix III, pgs. 137-143

Therefore, although the dependent and independent variables of the AVH and VOLHARV prediction models are the same for all of the forests, each must be viewed as a separate equation applicable to only that forest.

2. Volume Harvested and Average Value Harvested

The results of the stepwise regression estimates for the Volume Harvested and Average Value Harvested models are depicted in Tables 12 and 13 respectively.

Both models resulted in varying degrees of "goodness of fit" (R^2) depending on the specific forest analyzed. For example, with respect to the Volume Harvested model, R^2's ranged from .176 for the Bitterroot National Forest to .870 for the Routt National Forest. Although the R^2's were generally higher, the average Value Harvested model ranged from .306 for the Routt National Forest to .910 for the Mt. Hood National Forest.

In order to utilize these results in estimating timber receipts, both estimation models must be utilized and, consequently, a forest must have a "reasonably" accurate predictive model for both volume and average Value Harvested. The Routt National Forest for example, exhibited the highest R^2 in the Volume Harvest model. However, it had the lowest R^2 in the average Value Harvested model. Consequently, use of the equations to predict timber receipts could lead to erroneous results. Several other forests, including the Bitterroot, Tahoe, Kistachie, and the Nicolet have high R^2's with respect to one prediction model, and lower R^2's with respect to the other. Therefore, one should exercise caution in implementing these model results in predicting timber receipts for the study forests.

Before extrapolation of these model results to forests not included in the study, an additional source of error must be considered. Although a deliberate attempt to select sample forests from a region that were the most homogeneous with respect to the dependent and independent variables, these forests were statistically non-homogeneous. Examination

of the R^2's for the Volume and Average Value Harvested models within a region illustrates the wide variation in the predictability of the models. Therefore, unless one could determine that another forest was indeed homogeneous to one of the study forests, it would appear that extrapolation of these results to other forests would be of dubious value.

In view of these considerations, a more logical approach to establishing predictive models for other forests may be to utilize the functional approach of this analysis and "specific" forest data to generate a predictive model for each forest individually. This, however, may present certain data problems as previously discussed in the text. Futher, the application of the resulting functional model, based on specific time series of observations, must necessarily be used with caution for making predictions for future time periods. Each specific model should be reestimated utilizing most recent observations and used for short-term predictions only.

TABLE 12: Volume Harvested Prediction Model Results

REGION		FOREST	α_o	α_1	α_2	α_3	α_4	α_5	α_6	α_7	α_8	R^2	$\bar{R}^2$	σ
7	03	Bitterroot	+1598512.3	-.026	-.094	+46.144	+.730	a/	-1805.280	-811.854	+84.071	.176	.026	7971.15
			(1315357.8)	(.030)	(.137)	(45.600)	(.461)		(3539.986)	(668.851)	(97.326)			
1	10	Flathead	+2288540.7	+.036	-.040	+52.851	+.115	-24676.437	-10619.707	-1152.532	+117.957	.821	.782	7105.87
			(1711074.7	(.048)	(.053)	(53.393)	(.183)	(6719.507)	(4414.679)	(877.006)	(99.439)			
1	14	Kootenai	+1123551.3	+.052	-.037	+12.689	+.0002	-33161.755	-21123.905	-554.139	-63.380	.817	.777	7839.90
			(1812115.9	(.037)	(.039)	(58.097)	(.183)	(7574.695)	(5953.204)	(930.310)	(142.153)			
1	16	Lolo	+1349211.9	+.023	+.020	+12.302	-.031	-7904.632	-9513.932	-671.452	+31.882	.397	.265	8228.44
			(1591568.7)	(.019)	(.048)	(66.061)	(.190)	(4451.288)	(4173.276)	(812.632)	(143.204)			
2	06	Medicine Bow	-329187.56	+.008	-.103	+24.681	+.121	-5891.099	-5585.485	+169.585	-8.688	.832	.796	2084.36
			(571966.17)	(.014)	(.065)	(16.995)	(.166)	(1567.144)	(1336.035)	(289.462)	(46.832)			
2	09	Rio Grande	-1233330.2	-.006	-.048	-30.412	+.062	-5937.325	-5724.935	+633.447	+.062	.731	.672	1783.95
			(449676.88)	(.017)	(.036)	(13.185)	(.180)	(1276.375)	(1103.743)	(228.709)	(.180)			
2	11	Routt	+1347696.2	-.067	a/	+17.831	+.428	-4565.245	-3097.600	-679.919	+42.695	.870	.846	2039.75
			(482521.13)	(.039)		(17.183)	(.150)	(2064.435)	(1594.460	(245.090)	(30.744)			
2	13	San Juan	-15809621.0	+.184	+.085	-84.382	+.319	-15506.640	-9758.613	+8016.627	-207.247	.624	.542	5146.38
			(4643636.5)	(.060)	(.107)	(38.961)	(.160)	(3922.047)	(3008.056)	(2349.550)	(169.341)			
5	03	Eldorado	+3874021.8	+.064	-.031	+221.765	+.664	+8649.642	-5756.348	-1986.775	+48.845	.761	.701	12110.67
			(2418943.4)	(.071)	(.096)	(88.159)	(.145)	(8998.930)	(7610.6 3)	(1234.818)	(103.332)			
5	15	Sierra	+909835.51	-.054	+.048	+41.072	+.590	-3323.373	-3676.074	-448.473	a/	.706	.653	5691.83
			(1013831.3)	(.059)	(.044)	(39.828)	(.116)	(4474.875)	(3000.864)	(510.377)				
5	16	Stanislaus	+634115.28	-.022	-.065	+164.304	+.490	+4182 952	-5507.680	-316.656	-241.635	.657	.582	11955.49
			(2735153.4)	(.066)	(.078)	(79.484)	(.146)	(7386.878)	(6735.594)	(1388.562)	(118.766)			
5	17	Tahoe	+1136291.7	+.034	a/	+38.146	a/	-6517.816	-13107.719	-568.720	+88.961	.398	.309	8584.06
			(2209968.6)	(.034)		(62.170)		(4537.532)	(3950.584)	(1131.442)	(130.305)			
6	03	Pinchot	+1484865.0	-.030	-.183	-107.229	+.019	-11464.422	-109332.99	-646.134	+43.197	.783	.735	27116.62
			(5852671.3)	(.051)	(.130)	(218.693)	(.189)	(15177.422)	(25775.425)	(2993.261)	(244.014)			
6	05	Mt. Baker	+7013133.4	+.013	+.070	+250.610	+.429	+6865.563	-13495.879	-3569.101	+46.198	.803	.760	12175.19
			(3944996.7	(.062)	(.101)	(92.804)	(.145)	(6670.738)	(8186.099)	(1999.538)	(141.841)			
6	06	Mt. Hood	+5688254.3	-.041	-.007	+508.981	+.338	+16655.706	-39711.816	-2876.214	+145.035	.808	.766	21062.16
			(5781655.7)	(.044)	(.072)	(161.676	(.160)	(15919.524)	(16902.130)	(2961.179)	(272.116)			
6	15	Umpqua	+13477554.0	-.007	a/	+510.011	+.117	+17052.146	-35043.271	-6838.129	+390.780	.523	.436	29677.35
			(6340337.4)	(.054)		(233.313)	(.171)	(15666.288)	(16659.078)	(3241.222)	(310.449)			
8	06	Kistachie	(1281532.3	-.081	+.247	+47.542	-.167	+492.048	-8263.573	-650.840	+644.507	.518	.412	7628.65
			(4594501.1)	(.112)	(.131)	(61.217)	(.210)	(4230.512)	(3899.695)	(2343.280)	(287.811)			
8	09	Ouachita	-470510.58	-.003	+.109	+68.114	+.436	+5398.675	-1739.655	+241.858	-116.431	.609	.523	6388.51
			(1289024.4)	(.010)	(.073)	(53.437)	(.154)	(3829.847)	(3038.317)	(659.890	(255.021)			
8	10	Ozark-St.Francis	-291460.62	+.163	-.083	a/	+.180	+235.838	-545.558	+148.324	-59.362	.342	.223	2277.90
			(481665.14)	(.049)	(.115)		(.129)	(1066.469)	(918.476)	(245.402)	(85.522)			
8	13	Texas	+2097865.1	+.013	+.127	+30.519	a/	+547.928	-5964.566	-1059.154	-33.895	.459	.361	5747.03
			(1453176.1)	(.071)	(.103)	(46.574)		(3757.894)	(2722.009)	(742.085)	(127.364)			
9	03	Chippewa	-1155087.4	-.009	+.084	a/	+.245	-1841.906	+145.256	+589.432	+82.320	.449	.349	2656.55
			(688060.17)	(.010)	(.052)		(.163)	(1085.856)	(1069.539)	(350.631)	(241.856)			
9	04	Huron-Manistee	+1207294.5	+.117	+.012	-56.282	+.490	-1755.472	-4171.266	-621.277	+2081.045	.475	.360	5307.01
			(1800832.1)	(.103)	(.093)	(41.712)	(.162)	(3296.047)	(2717.788)	(927.172)	(1193.002)			
9	06	Nicolet	-2605067.7	-.002	+.124	-55.357	+.039	-4634.110	-284.122	+1333.674	-472.575	.382	.247	3390.45
			(1108981.1)	(.052)	(.102)	(28.684)	(.186)	(2163.211)	(1673.955)	(567.443)	(385.808)			
9	10	Hiawatha	-215837.27	-.038	+.236	+7.567	+.204	a/	-346.953	+113.226	-262.117	.552	.471	1686.05
			(398465.32)	(.026)	(.055)	(10.602)	(1.40)		(680.268)	(204.124)	(135.462)			

a/ Statistically insignificant to stepwise regression and therefore not entered into equation.

TABLE 13: Average Value Harvested Prediction Model Results

Region	Forest		α_0	α_1	α_2	α_3	α_4	α_5	α_6	α_7	α_8	α_9	R^2	$\bar{R}^2$	σ
1	03	Bitterroot	-4344.863	+1.050	-1.146	+8.513	+6.442	+2.207	+.727	+.106	-.0001	+.0004	.848	.809	9.03
			(3176.283)	(.268)	(.438)	(3.877)	(3.856)	(1.620)	(1.981)	(.107)	(.0002)	(.0003)			
1	10	Flathead	-6945.756	+.188	+.175	+5.414	+4.734	+3.544	-1.504	-.086	-.00004	a/	.639	.560	8.82
			(3503.318)	(.191)	(.356)	(3.758)	(3.831)	(1.788)	(1.910)	(.096)	(.00006)				
1	14	Kootenai	-7717.019	+.338	+.104	+3.607	+2.984	+3.938	-.658	-.169	-.00007	+.00008	.814	.767	6.41
			(2977.807)	(.155)	(.265)	(3.252)	(3.047)	(1.519)	(1.424)	(.061)	(.00004)	(.00006)			
1	16	Lolo	-67988.481	+1.156	-5.083	+48.401	+20.436	+34.591	-24.762	+.846	-.0001	+.0009	.362	.197	79.19
			(33684.649)	(1.805)	(3.257)	(33.664)	(33.413)	(17.162)	(16.987)	(.841)	(.0007)	(.0005)			
2	06	Medicine Bow	-7555.127	+.361	-.576	+4.235	+2.902	+3.841	-1.737	+.114	-.0004	+.00002	.772	.714	6.03
			(2505.543)	(.171)	(.672)	(2.884)	(2.511)	(1.275)	(1.255)	(.096)	(.0002)	(.00008)			
2	09	Rio Grande	-2406.936	-.443	+.609	-4.580	-7.147	+1.224	+1.203	+.034	+.00005	-.0002	.634	.540	8.47
			(3851.779)	(.171)	(.360)	(3.576)	(3.462)	(1.963)	(1.883)	(.076)	(.00019)	(.0001)			
2	11	Routt	-752.147	+.327	a/	+2.274	+2.061	+.390	+.293	-.104	-.00003	-.00004	.306	.155	5.39
			(1613.595)	(.144)		(2.372)	(2.335)	(.824)	(1.094)	(.067)	(.00011)	(.00010)			
2	13	San Juan	-4572.211	+.196	-.396	+1.675	-1.003	+2.326	+.109	+.063	-.00002	-.00004	.761	.699	4.47
			(1994.012)	(.153)	(.411)	(2.172)	(1.886)	(1.016)	(.915)	(.041)	(.00009)	(.00003)			
5	03	Eldorado	-12608.514	-.069	-.326	+4.776	-4.940	+6.421	-2.159	+.139	+.00005	+.003	.793	.739	8.69
			(3995.618)	(.113)	(.358)	(7.539)	(3.561)	(2.036)	(1.812)	(.112)	(.00008)	(.003)			
5	15	Sierra	-4009.130	-.208	+.384	+7.971	-4.488	+2.037	-1.034	+.141	-.00003	a/	.762	.710	5.69
			(2633.643)	(.136)	(.653)	(4.567)	(2.295)	(1.343)	(1.237)	(.075)	(.00004)				
5	16	Stanislaus	-15207.643	+.191	-1.607	+3.000	+1.839	+7.713	-.628	+.648	-.00007	-.00008	.875	.842	8.60
			(3860.862)	(.101)	(.392)	(6.022)	(3.692)	(1.964)	(1.808)	(.159)	(.00007)	(.00014)			
5	17	Tahoe	-10020.130	+.438	-1.115	+6.747	-5.175	+5.106	-1.334	+.104	a/	-.00011	.816	.776	6.79
			(3279.607)	(.149)	(.476)	(2.855)	(2.822)	(1.672)	(1.461)	(.067)		(.00006)			
6	03	Pinchot	-9272.413	+.251	-.174	+12.943	+15.700	+4.732	-1.765	-.056	-.00003	-.000003	.898	.872	6.45
			(2990.205)	(.140)	(.303)	(4.469)	(2.618)	(1.527)	(1.411)	(.102)	(.00003)	(.000017)			
6	05	Mt. Baker	+3.729	+.427	+.142	+13.427	+6.828	a/	+1.313	-.021	-.00009	-.00008	.859	.828	5.76
			(6.859)	(.127)	(.232)	(4.805)	(2.323)		(.663)	(.083)	(.00004)	(.00003)			
6	06	Mt. Hood	-10332.672	+.579	-.905	+9.368	+8.187	+5.278	-.853	-.060	-.00001	-.00003	.910	.887	4.96
			(3442.831)	(.160)	(.471)	(4.032)	(2.030)	(1.760)	(1.132)	(.083)	(.00003)	(.00004)			
6	15	Umpqua	-11792.162	+.104	-.520	+2.483	+3.497	+6.021	-1.631	-.083	+.00002	+.00001	.784	.728	5.89
			(3931.073)	(.076)	(.370)	(3.390)	(2.513)	(2.008)	(1.447)	(.076)	(.00003)	(.00003)			
8	06	Kistachie	-7210.975	+.639	-.503	a/	-.887	+3.683	-1.789	-.060	b/	b/	.882	.864	4.50
			(3911.056)	(.213)	(.453)		(1.676)	(1.995)	(.979)	(.047)					
8	09	Ouachita	-1377.321	+.923	-.341	-1.012	+4.238	+.716	a/	-.157	b/	b/	.678	.642	3.23
			(713.667)	(.235)	(.323)	(1.266)	(1.260)	(.366)		(.047)					
8	10	Ozark-St. Francis	-4024.454	+.326	-.086	+1.219	+.835	+2.056	-1.693	+.037	b/	b/	.780	.740	4.08
			(1791.526)	(.226)	(.315)	(1.647)	(1.603)	(.914)	(.867)	(.048)					
8	13	Texas	-21491.522	+.122	-1.819	+6.639	+6.126	+10.989	-1.373	-.349	b/	b/	.709	.656	9.10
			(4383.157)	(.292)	(.430)	(3.718)	(3.654)	(2.241)	(1.824)	(.142)					
9	03	Chippewa	+1294.016	+.038	+1.037	-.087	+.889	-.662	+1.044	+.030	b/	b/	.579	.502	2.04
			(677.664)	(.196)	(.252)	(.807)	(.831)	(.346)	(.408)	(.016)					
9	04	Huron-Mainstee	+.758	-.119	+.118	+.963	+.470	a/	+.597	-.004	b/	b/	.571	.508	1.11
			(1.114)	(.314)	(.296)	(.441)	(.438)		(.113)	(.011)					
9	06	Nicolet	+718.269	+.534	+.319	+.220	+.190	-.367	+.918	-.010	b/	b/	.688	.631	2.05
			(729.118)	(.178)	(.294)	(.819)	(.815)	(.373)	(.412)	(.016)					
9	10	Hiawatha	-692.700	+.252	+.132	+1.996	+.402	+.353	+1.140	-.030	b/	b/	.838	.808	1.80
			(829.567)	(.130)	(.244)	(.719)	(.715)	(.424)	(.363)	(.019)					

a/ Statistically insignificant to stepwise regression and therefore not entered into equation.

b/ Variable is either a constant or equal to zero for all observations.

IV. DATA COLLECTION

A. Variable Definition and Sources

Data requirements for this analysis were determined by the *a priori* model specifications implicit in the study plan and in view of the stated project objectives. Availability of adequate data sources limited the scope of coverage, as noted elsewhere in this report. Specific data related to study forest parcels utilized in this analysis was supplied by the Washington Office of the U.S. Forest Service and the various Regional Offices (and, through these Regional Offices, the Study Forests) for the period 1964-1973.

A tabulation of the data requested and supplied from the Forest Service Washington Office is included in Appendix IIA. Aggregate series for economic indicators were compiled by the University of Washington from published statistical sources and are also included in Appendix IIB.

B. Data Transformation

1. VARIABLE LAGS

Because of hypothesized time relationships between some of variables, lags were often used. Where a variable name is followed by a number, the number indicates the number of quarters the variable was lagged. For example, PIDFLB2 implies a two quarter lag of the price index of Douglas-fir lumber. Similarly, VOLS04 implies a four quarter lag of volume sold.

2. VARIABLE AVERAGES

Average values were calculated for value sold and value harvested by dividing total value sold and harvested by the respective volume. Thus, for each of the quarterly data:

Average Value Harvested (AVH) = VALHARV/VOLHARV

Average Value Sold (AVS) = VALSOLD/VOLSOLD.

Also, total weighted average value sold and harvested were calculated. Weighting was done on a volume basis over four and eight quarter time horizons. That is:

Total weighted average value sold over four quarters (TWAVS4)

$$= \frac{VOLSOLD_1}{\sum_{i=1}^{4} VOLSOLD_i}(AVS_1) + \frac{VOLSOLD_2}{\sum_{i=1}^{4} VOLSOLD_i}(AVS_2) + \frac{VOLSOLD_3}{\sum_{i=1}^{4} VOLSOLD_i}(AVS_3)$$

$$+ \frac{VOLSOLD_4}{\sum_{i=1}^{4} VOLSOLD_i}(AVS_4)$$

Calculations for Total Weighted Average Value Harvested over four quarters (TWAVH4) was done using the same equation and substituting VOLHARV for VOLSOLD and AVH for AVS.

Calculations of Total Weighted Average Value Sold over eight quarters (TWAVS8) and Total Weighted Average Value Harvested for eight quarters (TWAVH8) were similarly calculated.

3. Adjustment of Annual Data to Quarterly Data

The basic data for UVOLUC derived from Forest Services records was an annual series. In order to utilize this variable in estimated equations with the other variables as provided and/or calculated, it was necessary to convert this variable to quarterly estimates. Since UVOLUC and VOLSOLD are estimated volumes, whereas

the VOLHARV is an actual measured volume, it was not possible to add the difference [VOLSOLD-VOLHARV] for the quarter to the UVOLUC reported for the beginning of each year to arrive at the UVOLUC for the following quarter. This was attempted and the discrepancies between calculated year-end UVOLUC and reported UVOLUC were often significant.

In order to keep consistency with reported data, it was assumed that the change in UVOLUC on a quarter by quarter basis was consistent with the proportions of quarterly volumes harvested and sold relative to the yearly totals. Thus, quarterly estimates were derived by the following procedure:

$$UVOLUC_{Qt} = UVOLUC_t + \overset{\cdot}{UVOLUC}_t \left[\frac{VOLSOLD_{Q-1,t}}{VOLSOLD_t} - \frac{VOLHARV_{Q-1,t}}{VOLHARV_t} \right]$$

where:

$UVOLUC_{Qt}$ = Uncut volume under contract at beginning of Qth quarter of year t where $Q \neq 1$ (when Q=1, $UVOLUC = UVOLUC_t$)

$UVOLUC_t$ = Reported uncut volume under contract at beginning of year t

$\overset{\cdot}{UVOLUC}_t$ = Change in reported volume under contract from 1st of year t to first of year t+1

$VOLSOLD_{Q-1,t}$ = Volume sold in previous quarter of year t

$VOLHARV_{Q-1,t}$ = Volume harvested in previous quarter of year t

4. Creation of Dummy Variables

Due to quarterly fluctuation in some variables utilized, dummy variables were created to account for the seasonal fluctuations. For example, when reviewing plots of the residuals for the regression models to predict VOLHARV and VOLSOLD for Region 6, a definite pattern was detected where the residuals of the first and second fiscal quarters were small relative to those for the third and fourth fiscal quarters. Also, the residual of the third quarter frequently had the opposite sign of that of the fourth quarter. Therefore, to account for this pattern, two dummy variables were incorporated where;

D_1	D_2	
0	0	for the first and second fiscal quarters
1	0	for the third fiscal quarter
0	1	for the fourth fiscal quarter

C. Data Requested but not Available

All data from the Forest Service Washington Office was available as requested. Some supplemental data, however, was not obtainable from the Washington Office records, necessitating securing data from the Regional Offices, which in turn, coordinated data compilation by the respective National Forests. Variables included in this category included:

(1) market area designated by county

(2) capacity of mills in the market area by SIC24 and SIC26 codes

(3) dependency of mills in market area on National Forest timber originating on the study forest (DEPSTU) and other national forests (DEPOTH), and

(4) log inventory carried by mills at or near the mill site (INVEN).

Several regional offices, however, were unable to supply part or all of the requested data. No supplemental data was received for any of the National Forests of the California Region (R-5), or from the Hiawatha National Forest of the Eastern Region (R-9). The Southern Region (R-8) attempted to supply the data requested, utilizing questionnaires to mills in the National Forests' market areas. It was believed, however, that the sample size responding to the questionnaire was so small as to make any statistical inference to the total population very dubious. Therefore, this data was not utilized.

Much of the data supplied by Regions and Forests was necessarily reported as annual estimates. It was not possible, in many cases, to transform these estimates into meaningful quarterly data. Such transformations would require explicit assumptions as to the seasonal nature of these variables. Therefore, these variables could not be utilized in this analysis. This problem was particularly evident with respect to DEPSTU, DEPOTH and INVEN estimates submitted.

The most important variable that could not be obtained on a quarter-by-quarter basis was the supply of timber from sources other than national forests. This would include timber supplied by private landowners as well as other public agencies. Although several possible sources for this data were discussed in much detail with the Regional Offices, all suggested sources subsequently explored proved fruitless.

It appears that usable data on total timber supply is simply not available without a much more detailed study of each market area and ownership. Such a study was beyond the scope of this analysis. The only region where data for other timber supplies is regularly reported and available is in the Douglas-fir area of the Pacific Northwest Region (R6).[30] This data is reported as annual volumes and is aggregated at the county-state level (Washington and Oregon). Therefore, it could not be incorporated into this analysis on a quarterly basis.

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[30] "Oregon Timber Harvest" and "Washington Timber Harvest", U.S.D.A., Forest Service, (Annual Series) Resource Bulletin, Pacific Northwest Forest and Range Experiment Station, Portland, Oregon.

V. CONCLUSIONS AND SUGGESTED AREAS OF FURTHER RESEARCH

A. Homogeneity and Aggregate Models

The assumption of forest homogeneity within a specific region appears to be erroneous. Therefore, a model formulation that implicitly involves the "pooling" of data from various forests is of dubious value. Although this problem was encountered in attempting to estimate the timber sales receipts models specific to this analysis, this forest heterogeneity may be the underlying cause of the failure of many such prediction models when applied at a multi-regional or national level. That is, instead of attempting to formulate aggregate prediction models, it may be more fruitful to investigate disaggregate models. This should, perhaps, be investigated further with the level of disaggregation at the forest or even ranger district level. Even though this disaggregated approach may be more costly in terms of data requirements and depth of analysis, it may provide greater accuracy in terms of the estimates provided.

B. Quarterly versus Annual Markets

The seemingly high price elasticity of demand for National Forest timber, even considering the bias of the estimation model, is perhaps not as surprising as one might first assume in view of the quarterly data specification utilized.

The volume of timber sold from National Forests follows a definite "seasonal" pattern. During the first and third fiscal quarters, the volume of timber offered and sold is generally low relative to the timber offered and sold in the second and fourth fiscal quarters (although several forests exhibit differing patterns). To the extent that purchasers are aware of this yearly pattern, and recognizing the multi-year duration of most sale contracts, one would not necessarily expect short term (quarter by quarter)

stumpage prices to fluctuate with the quarterly variation in sales volume. That is, even if volume sold is low in a particular quarter (implying that prices paid "should" be relatively high), purchasers may in fact not bid high prices with the knowledge that larger sales volumes will be available over the next several quarters as announced in forest sales plans. Therefore, stumpage markets may more properly be considered to be annual (or multi-annual) markets rather than a quarterly market. For this reason, elasticity estimates utilizing quarterly data may be highly misleading because of irrelevant variable "noise" from quarterly fluctuations. In essence, this would constitute a misspecification of micro-economic theory and therefore of the estimation model.

Another possible area for further analysis therefore, is a systematic analysis of the "timing" or "market duration" of stumpage markets. Before such an analysis may be undertaken, the potential bias encountered in the model of this analysis must be considered. The primary bias of the model resulted from the inability to incorporate alternative timber sales supplies (i.e., other public agencies and private forests) because of the lack of available data.

C. Model Bias

In addition to the bias created by the inability to incorporate alternative timber sales supplies into the estimated timber sales demand equation, however, other sources of bias of this model and other demand models should be considered. If the objective of the analysis is to interpret the values of the coefficients after formulating a demand equation and obtaining the estimates of the coefficients, then sources of bias become extremely relevant. In order to be able to interpret the coefficients of such an equation in any meaningful manner, one must first have an unbiased model.

In general, the inclusion of a variable in an estimation equation, which utilizes an ordinary least squares estimation procedures, that "ought not" to be included (i.e., is not relevant to the theory) does not imply that the equation is biased.[31] It does, however, increase the variance of the estimates. On the other hand, exclusion of a variable that "ought" to be included does create a bias in the equation.[32] This was the case encountered in the estimated demand equation for National Forest timber in this analysis because of the inability to include alternative timber supplies as an independent variable.

Different researchers utilizing the same data may include different variables that they feel are relevant in model specification. This may reasonably include a subset of variables common to both models. Neither researcher will have a biased model (according to their theories), but the empirical estimates of the coefficients of the common variables will likely differ. For example, if the coefficient both researchers are attempting to interpret reflects the price elasticity of demand, model specification can critically effect the resultant estimates.

As a further example of the interpretation of empirically estimated coefficients, consider the example of a researcher utilizing a model to estimate demand utilizing data for a time series of twenty years. If the researcher uses the same model, but altering the length of the time series of observations, the estimated coefficients will also differ. In this case, the bias is not a question of which "model" is correct, but the relevance of the time series utilized.

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[31] Rao, Potluri, op. cit., p.57

[32] Rao, Ibid., p.61.

A somewhat similar problem of interpretation of empirically estimated coefficients was encountered in this analysis. The same model was utilized to estimate a demand function for all of the study national forests. However, each forest had a different set of data that was utilized in the estimation procedure. Consequently, each forest had a different estimated price elasticity of demand. Problems of a conceptual as well as empirical nature arise when one interprets these elasticity of demand estimates particularly when they differ greatly from forest to forest within a region versus other estimates of elasticities formulated with aggregated regional or multi-regional models.

One must be extremely cautious about the interpretation of empirically estimated coefficients since, from the above discussion, they are only relevant to (1) the model specified, and (2) the data (in terms of the included observations of a given body of data or in terms of two separate bodies of data).

D. Demand for National Forest timber versus the demand for timber

An implicit assumption of the original study plan and demand model formulation was that there existed a separate demand schedule for National Forest timber that was conceptually and empirically distinct from the demand schedule for alternative timber supplies. However, a necessary condition for the consideration of a separate demand schedule for a good, product differentiation, is not apparent in the case of timber. This would require the market to differentiate between National Forest logs versus other public agency or private industry logs of the same size and log grade. Except in cases of near monopoly market structure, such a supply condition is conceptually difficult to justify. Therefore, the distinction of a demand

for National Forest timber appears to have limited applicability. Furthermore, in the empirical estimation results of this analysis, the results are biased in that other sources of timber were not incorporated. This source of timber was explicitly assumed to be a portion of the quantity demanded in the estimation equation, implying that the demand schedule is for timber and not distinctly National Forest timber.

Appendix I: Variable Description and Cited Source

APPENDIX I

VARIABLE NAME	VARIABLE DESCRIPTION AND CITED SOURCE
REGION FOREST	Forest Service Forest Code source: codes for 2400-17 ADP Record (old program) description: Each forest administration unit within a region has assigned to it a forest code number. This code was included to facilitate data collection and was retained to maintain data separation throughout the analysis.
UVOLUC	Uncut Volume Under Contract source: Annual National Forest Sale Accomplishment Reports. Table II Summary of Timber Sale Accomplishment and Allowable Harvest on the National Forests. description: Data is available on a yearly basis only as its label implies. The data reported under fiscal year 1963 and 1964 are actually calendar year figures while 1965-74 are fiscal year figures. This is a result of change in data reporting from a calendar year base to a fiscal year base. Units are in MBF. In Table II, the original data was reported in millions of board feet and thousands of cords. A total result including both measures was calculated and recorded in MBF. Cords were converted to MBF at 2 cords/MBF.
VOLSOLD*	Volume Sold source: Cut and Sold Reports (2400-49's) sales classes 5 through 8. description: Units = MBF. Under "Sold" column, the sum of the volumes listed under Size and Class Codes 5 through 8 was reported. Class 5 = Over $2000 through 2000 MBF Class 6 = Over 2000 MBF through 5000 MBF Class 7 = Over 5000 MBF through 15000 MBF Class 8 = Over 15000 MBF

VALSOLD* Value Sold

source:
Same as VOLSOLD

description:
Units = dollars. Under "Sold" column, the sum of timber value figures listed under Size and Class Codes 5 through 8 was reported.

VOLHARV* Volume Harvested

source:
Same as VOLSOLD

description:
Same as VOLSOLD, however, under "Cut" Column.

VALHARV* Value of Harvested Volume

source:
Same as VOLSOLD

description
Same as VOLSOLD, however, under "Cut" Column.

* Footnote

For Region 9,

No data was available for cut & sold volume and value for:

FY 1963	Q 1, 2, 3
FY 1964	Q 1, 2, 3
FY 1965	Q 1, 2, 3

LOGCO Logging Cost

source:
For FY 1964-73, Table 4a, Appraisal Elements (Volume Weighted Average of Cost Elements), found in print-out titled, Zone and State Summaries by Regions of Advertised Timber Sale.

For FY 1974, Table 5, Summary of Appraisal Elements (Cost Elements, Purchaser Credit, found in print-out titled, Report of Timber Sale (2400-17).

description:
All values are expressed as dollars and some odd cents per MBF. Data was adjusted from calendar year quarters to fiscal year quarters. From FY 1964-67 logging cost was listed in the original data under the column labeled ST-TR.

From FY 1967 through 1974 logging cost (stump to truck) was determined by adding together the columns of "fell-buck" and "skid-load." The reason for this change in procedure is simply that prior to FY 1968 the logging cost was not broken down into the "fell-buck" and "skid-load" classes.

The original data was reported under three different measures - MBF, cords, and cunits (100 cu. ft.). Cords were converted to MBF @ 2 cords/MBF. For Region 6 cunits were converted to MBF @ .44MBF/cunit. For Region 8 cunits were converted to MBF @ .77 MBF/cunit. $/cord was converted to $/MBF by multiplying $/cord by 2.

$/cunit was converted to $/MBF by dividing by the appropriate conversion factor.

The final reported result was a weighted average by MBF volume of the converted data.

HAULDI Haul Distance

source:
For FY 1964 quarter 3 through FY 1971 quarter 1, Individual Sales Report Sheets

For FY 1971 quarter 2 through FY 1973, Table 4a (same as 9 and 10).

For FY 1974, Table 5 (same as in number 9 and 10).

HAULDI

description:
Data was adjusted from calendar year quarters to corresponding fiscal year quarters.

For FY 1964-71 quarter 1 a weighted average by MBF was calculared from data off of the individual sales sheets by converting cords to MBF.

$$\text{Log haul miles} = \sum_{i=1}^{n} (\text{miles} \times \text{volume}) / \sum_{i=1}^{n} (\text{volume})$$

where n = the number of sales

For FY 1971 quarter 2 1973, Table 4a contained a weighted average of log haul miles for each corresponding measure used - MBF, cords, cunnits. To arrive at an overall log haul figure the corresponding volumes under each measure were converted to MBF and a weighted average was calculated as described above. For FY 1974 Table 5 was used in a similar manner to Table 4 as listed above. The Washington Office only had data available back to FY 1964 quarter 3.

ESCVOL

Volume Sold With Escalation

source:
Individual Reports of Advertised Sale FS 2400-17, Total Volume, item (20-26), recorded only when Pricing Method, item (24), indicates that the sale was made with escalating rates. Reports which indicated an advertised sale with "No Bidders" were ignored.
Reports which concerned the sale of Christmas Trees were ignored. (One report)

description:
Data is available for the calendar years 1964 through 1974. Units are in MBF. All reports recorded units in MBF, so that no conversions were necessary.

RRVOL

Sales With Rate Redetermination

source:
Individual Rate Redetermination Reports FS 2400-19. Data recorded for each report only when it was indicated that the sale was not made by flat rate.

a. Volume- taken from line a, Total Volume
b. Old Price- taken from line u Current Contract Tentative Rates (Average Value)
c. New Price- taken from line y, Established Tentative Rates (Average Value)
d. New Price/Old Price ratio calculated by Radcliffe at the Washington Office

e. Action- determined according to the color of the individual 2400-19 (blue = rate redetermination, pink = extension) and by which date block was used ("Effective Date for New Rates" = rate redetermination, "Effective Date of Extension" = extension)

Description:
See ESCVOL description
a. Volume units are in MBF
b. Price units are in $/MBF
c. Under Action, E = extension, R = rate redetermination

The following is a listing of the data requested and supplied from the Forest Service's Regional and Forest Offices:

TCAPAC TCAP24 TCAP26	Total capacity of mills in the market area* by SIC classification 24 (production of lumber and wood products) and 26 (production of pulp, paper, and allied products). Total capacity was defined as based on equivalent round-wood requirement necessary to convert primary product or products actually manufactured, by utilizing local roundwood scale. The ratio capacity is expressed in rated capacity in MBF per eight hour shift.**
DEPSTU	National Forest Timber Dependency
DEPOTH	Estimates of the quarterly average purchase or depending on timber of the mills in the market area from the study forest and other national forests. This is expressed as a percentage of timber processed by mills in the market area originating on the study or other national forests. This is an average estimate for all mills in the designated market area.
INVEN	Inventory at Mill Site Estimates of the quarterly average log inventory volume of mills at, or near, the mill site expressed as a percentage of average mill capacity.

*Regional offices were also requested to define forest parcel stumpage market areas. Market areas were defined as those counties where actual conversion of National Forest timber has occurred within the last four years exclusive of "export" volumes or other "unusual" sales conditions. As a general "rule of thumb", in market area designation, it was suggested that, include only those countries that receive the sum of 80% or more of the National Forest timber sold.

The following data was compiled at the University of Washington:

Variable Name	Variable Descriptions and Sources
AAA	AAA Corporate Interest Rate Source: Moody's Investors Service (Contained in Statistical Appendix, Economic Report of the President (Annual)
ADJHS	Seasonally Adjusted Housing Starts Source: Department of Commerce, Department of Housing and Urban Development (Contained in Statistical Appendix, Economic Report of the President - Annual)
MTOTHS	Monthly Total Housing Starts Source: Same as ADJHS
PIDFLBR	Price Index of Douglas-fir Lumber Source: "Fingertip Facts and Figures", National Forest Products Association (Adjusted 1976 = 100)
PISWPLY	Price Index of Softwood Plywood Source: Same as PIDFLBR
HDFLBR	Hemlock-Douglas-fir Lumber Prices Source: Random Lengths Yearbook (Hem-Fir (Coast) Std. & Better, Kiln Dried 2 x 2 RL)
GNP	Gross National Product Source: Department of Commerce, Bureau of Economic Analysis (Contained in Statistical Appendix, Economic Report of the President - Annual)
PIMAT	Price Index of Industrial Materials Source: Department of Labor, Bureau of Labor Statistics, (Contained in Statistical Appendix, Economic Report of the President - Annual)
GWE	Average Gross Weekly Earnings in Manufacturing (Seasonally Adjusted) Source: Same as PIMAT
PIPAP	Price Index of Pulp, Paper, and Allied Products Source: Same as PIMAT

Appendix IIA: Forest Data

DATA FURNISHED BY THE WASHINGTON OFFICE

REG	FOR	FISCAL YEAR	FISCAL QTR	UNCUT VOLUME UNDER CONTRACT	VOLUME SOLD	VALUE SOLD	VOLUME HARVESTED	VALUE HARVESTED	LOGGING COST	HAULING COST	HAUL DIST	VOLUME SOLD SUBJECT TO ESCALATION	VOLUME SOLD SUBJECT TO RATE REDET	RATE REDET PRICE CHANGE OLD	RATE REDET PRICE CHANGE NEW	NO OF SALES
1	3	63	1	88600	2812	11173	24062	498260	-.00	-.00	-0	-0	-0	-.00	-.00	-0
1	3	63	2	-0	9560	70640	13692	550390	-.00	-.00	-0	-0	-0	-.00	-.00	-0
1	3	63	3	-0	1669	28421	14818	863840	-.00	-.00	-0	-0	-0	-.00	-.00	-0
1	3	63	4	-0	30024	254119	8569	461780	-.00	-.00	-0	-0	-0	-.00	-.00	-0
1	3	64	1	92100	6040	84811	14714	64300	10.00	9.69	-0	0	0	.00	.00	2
1	3	64	2	-0	11960	237068	12873	84809	10.59	8.60	-0	0	0	.00	.00	6
1	3	64	3	-0	6320	108563	14623	167676	11.21	11.00	43	6320	0	.00	.00	1
1	3	64	4	-0	16190	263540	7887	89431	10.39	9.28	31	16190	0	.00	.00	4
1	3	65	1	79200	2144	66603	15376	144291	10.01	7.10	23	2144	0	.00	.00	2
1	3	65	2	-0	25743	482262	12712	172710	10.85	8.17	25	24337	0	.00	.00	7
1	3	65	3	-0	1	0	16717	266417	-.00	-.00	-0	0	800	5.14	8.09	0
1	3	65	4	-0	14320	108159	11104	182393	11.71	10.91	38	13775	0	.00	.00	4
1	3	66	1	88100	1	0	15551	231469	-.00	-.00	-0	0	8708	12.92	12.92	0
1	3	66	2	-0	40076	281581	14200	186693	11.15	9.39	29	39436	16100	2.70	2.70	9
1	3	66	3	-0	4446	66305	16490	167964	12.96	8.65	31	4100	0	.00	.00	2
1	3	66	4	-0	22122	85625	19057	211967	12.64	11.59	38	16282	1469	2.06	2.06	4
1	3	67	1	96600	6715	115044	16376	134394	10.32	6.16	27	5788	4296	6.80	6.80	2
1	3	67	2	-0	22004	254173	13475	129339	13.04	9.74	31	8374	15998	16.77	16.77	5
1	3	67	3	-0	1	0	17295	155421	-.00	-.00	-0	0	0	.00	.00	0
1	3	67	4	-0	27936	180384	8832	66279	15.45	10.60	29	22740	0	.00	.00	9
1	3	68	1	99200	18630	96584	11749	115122	15.61	11.05	33	18630	0	.00	.00	3
1	3	68	2	-0	27740	295897	18115	214355	14.22	11.35	38	27740	6428	7.08	7.08	4
1	3	68	3	-0	6300	141491	15671	220704	13.80	6.85	24	6300	0	.00	.00	1
1	3	68	4	-0	7256	126388	16795	298163	15.73	7.12	19	5600	0	.00	.00	3
1	3	69	1	91700	6870	192096	15459	220606	14.24	8.82	32	6870	0	.00	.00	3
1	3	69	2	-0	35060	963080	15943	337418	17.37	9.13	34	33360	9330	7.88	14.59	8
1	3	69	3	-0	5090	30125	19021	706774	20.82	9.58	32	5090	11073	7.42	7.42	1
1	3	69	4	-0	12660	850359	19171	679896	12.80	7.48	21	12260	0	.00	.00	2
1	3	70	1	232500	1950	55707	14622	394535	14.88	6.66	16	1800	0	.00	.00	2
1	3	70	2	-0	35260	456911	14409	237038	16.95	9.12	31	35160	3010	12.00	12.00	10
1	3	70	3	-0	120	3900	8217	152971	13.06	7.96	8	0	6140	2.13	2.13	1
1	3	70	4	-0	715	11022	9567	223913	16.66	7.89	16	0	7720	16.24	16.24	3
1	3	71	1	70000	830	10228	13713	169993	19.06	7.76	20	830	0	.00	.00	1
1	3	71	2	-0	7582	53074	10556	79525	17.41	9.71	40	7580	14620	4.77	4.77	2
1	3	71	3	-0	1	0	8138	157439	-.00	-.00	-0	0	6140	2.43	2.43	0
1	3	71	4	-0	17841	157384	9711	194502	19.63	9.00	27	17841	2710	38.98	38.98	4
1	3	72	1	53500	200	3148	14647	360511	27.54	10.66	44	0	0	.00	.00	1
1	3	72	2	-0	7795	316136	13429	332164	16.97	10.65	27	7795	18400	7.50	7.50	3
1	3	72	3	-0	1	0	9233	324019	-.00	-.00	-0	0	17870	26.61	27.84	0
1	3	72	4	-0	18402	677340	6293	176436	25.11	8.83	27	0	0	.00	.00	11
1	3	73	1	47400	179	4237	12761	271389	30.89	12.16	18	0	0	.00	.00	1
1	3	73	2	-0	9745	523576	7007	201425	27.90	14.20	26	0	9360	14.41	48.77	5
1	3	73	3	-0	1	0	11175	716135	-.00	-.00	-0	0	0	.00	.00	0
1	3	73	4	-0	14543	852883	5073	302098	39.76	16.57	34	0	0	.00	.00	12
1	3	74	1	56600	1811	498391	55602	1574943	24.06	9.39	32	7884	0	.00	.00	1
1	3	74	2	-0	14598	711318	4033	384238	38.64	10.76	31	11678	0	.00	.00	14
1	3	74	3	-0	1	0	7068	515571	-.00	-.00	-0	0	0	.00	.00	0
1	3	74	4	-0	6515	133457	5998	427243	40.14	12.84	39	0	0	.00	.00	3

DATA FURNISHED BY THE REGIONAL OR FOREST OFFICES

REG	FOR	FISCAL YEAR	FISCAL QTR	TOTAL SIC 24 CAPACITY	TOTAL SIC 26 CAPACITY	TOTAL CAPACITY	MILL SITE INVENTORY
1	3	64	3	60.8	.0	60.8	-.00
1	3	64	4	60.8	.0	60.8	-.00
1	3	65	1	60.8	.0	60.8	-.00
1	3	65	2	60.8	.0	60.8	-.00
1	3	65	3	75.0	.0	75.0	-.00
1	3	65	4	75.0	.0	75.0	-.00
1	3	66	1	75.0	.0	75.0	-.00
1	3	66	2	75.0	.0	75.0	-.00
1	3	66	3	94.8	.0	94.8	-.00
1	3	66	4	94.8	.0	94.8	-.00
1	3	67	1	94.8	.0	94.8	-.00
1	3	67	2	94.8	.0	94.8	-.00
1	3	67	3	65.1	.0	65.1	-.00
1	3	67	4	65.1	.0	65.1	-.00
1	3	68	1	65.1	.0	65.1	-.00
1	3	68	2	65.1	.0	65.1	-.00
1	3	68	3	84.3	.0	84.3	-.00
1	3	68	4	84.3	.0	84.3	-.00
1	3	69	1	84.3	.0	84.3	-.00
1	3	69	2	84.3	.0	84.3	-.00
1	3	69	3	85.4	.0	85.4	-.00
1	3	69	4	85.4	.0	85.4	-.00
1	3	70	1	85.4	.0	85.4	-.00
1	3	70	2	85.4	.0	85.4	-.00
1	3	70	3	81.4	.0	81.4	-.00
1	3	70	4	81.4	.0	81.4	-.00
1	3	71	1	81.4	.0	81.4	-.00
1	3	71	2	81.4	.0	81.4	-.00
1	3	71	3	80.5	.0	80.5	-.00
1	3	71	4	80.5	.0	80.5	-.00
1	3	72	1	80.5	.0	80.5	-.00
1	3	72	2	80.5	.0	80.5	-.00
1	3	72	3	76.8	.0	76.8	-.00
1	3	72	4	76.8	.0	76.8	-.00
1	3	73	1	76.8	.0	76.8	-.00
1	3	73	2	76.8	.0	76.8	-.00
1	3	73	3	76.2	.0	76.2	-.00
1	3	73	4	76.2	.0	76.2	-.00
1	3	74	1	76.2	.0	76.2	-.00
1	3	74	2	76.2	.0	76.2	-.00

DATA FURNISHED BY THE WASHINGTON OFFICE

REG	FOR	FISCAL YEAR	FISCAL QTR	UNCUT VOLUME UNDER CONTRACT	VOLUME SOLD	VALUE SOLD	VOLUME HARVESTED	VALUE HARVESTED	LOGGING COST	HAULING COST	HAUL DIST	VOLUME SOLD SUBJECT TO RATE REDET: ESCALATION	VOLUME SOLD SUBJECT TO RATE REDET: RATE REDET	RATE REDET PRICE CHANGE: OLD	RATE REDET PRICE CHANGE: NEW	NO OF SALES
1	10	63	1	245200	8963	134608	55143	436356	-.00	-.00	-0	-0	-0	-.00	-.00	-0
1	10	63	2	-0	48371	655743	29416	252734	-.00	-.00	-0	-0	-0	-.00	-.00	-0
1	10	63	3	-0	28571	466435	24952	257815	-.00	-.00	-0	-0	-0	-.00	-.00	-0
1	10	63	4	-0	42094	530973	16976	197370	-.00	-.00	-0	-0	-0	-.00	-.00	-0
1	10	64	1	295400	5589	65171	50199	478566	10.57	9.90	-0	0	0	.00	.00	5
1	10	64	2	-0	54094	669639	35614	459697	12.01	10.71	-0	0	0	.00	.00	17
1	10	64	3	-0	19651	212752	26518	330121	11.35	15.52	63	21900	0	.00	.00	5
1	10	64	4	-0	41225	766037	10791	163562	11.10	10.70	38	37215	40925	8.69	6.05	12
1	10	65	1	285900	37633	491391	51170	604051	11.12	11.41	43	40380	0	.00	.00	9
1	10	65	2	-0	43155	622442	37092	476537	11.21	11.39	38	42300	51000	7.64	7.64	9
1	10	65	3	-0	15300	133973	24655	327613	12.23	11.17	35	14380	0	.00	.00	5
1	10	65	4	-0	16830	106063	14618	251046	12.07	13.07	51	16830	51800	18.48	4.20	5
1	10	66	1	280000	32740	276766	52378	538894	10.53	11.07	40	30190	0	.00	.00	9
1	10	66	2	-0	42648	608456	42308	489114	11.08	11.28	35	40785	83071	8.95	8.95	13
1	10	66	3	-0	3540	38762	33024	472740	12.83	11.63	39	3400	0	.00	.00	2
1	10	66	4	-0	33460	448691	12611	195083	10.98	10.78	38	31190	18000	20.56	9.18	8
1	10	67	1	289200	24765	242511	54375	849482	11.91	11.13	43	23388	3965	20.26	20.26	12
1	10	67	2	-0	53750	864171	33507	369891	12.76	12.64	39	50810	69333	10.27	13.75	10
1	10	67	3	-0	7144	119755	27732	393053	13.24	8.94	27	4350	0	.00	.00	9
1	10	67	4	-0	38929	662193	7186	77772	13.72	14.58	46	18565	44740	16.54	4.60	33
1	10	68	1	284300	4435	97780	36993	472431	13.92	10.71	36	0	0	.00	.00	0
1	10	68	2	-0	47683	1027454	44643	641262	14.19	12.25	37	42000	88715	11.53	11.59	17
1	10	68	3	-0	16654	204732	43263	1025907	15.73	16.50	50	7610	0	.00	.00	10
1	10	68	4	-0	66585	1224021	17966	449375	13.72	11.24	36	48830	22100	14.21	11.61	29
1	10	69	1	276900	2738	88946	43060	920931	15.60	11.78	39	0	0	.00	.00	7
1	10	69	2	-0	56493	2434178	48459	1154327	14.58	10.45	35	51260	68965	11.28	23.23	17
1	10	69	3	-0	42387	2439444	42102	1624190	14.30	16.68	69	11080	0	.00	.00	6
1	10	69	4	-0	40214	1854157	22029	1302991	16.48	14.08	48	37825	22500	14.68	37.06	9
1	10	70	1	373600	54608	1034715	51776	1335357	15.95	13.34	41	53360	3380	38.26	67.43	12
1	10	70	2	-0	82730	1667216	45176	669164	16.88	10.87	40	78959	31780	11.52	12.81	21
1	10	70	3	-0	17070	119450	27460	468120	18.19	11.73	35	15440	22640	14.95	14.95	6
1	10	70	4	-0	62546	932199	7463	93260	15.54	11.69	35	60210	19000	39.94	14.24	17
1	10	71	1	375700	6504	108598	46990	573309	22.34	8.53	24	3900	0	.00	.00	3
1	10	71	2	-0	10780	187843	47298	865223	23.73	11.08	50	10780	20320	13.68	13.68	3
1	10	71	3	-0	14250	210636	53737	930974	21.23	11.59	44	10800	11020	60.48	60.48	5
1	10	71	4	-0	110370	1914767	10852	307663	24.11	11.74	41	109560	0	.00	.00	18
1	10	72	1	343400	1492	58181	62653	1727806	18.33	12.19	42	0	26010	28.85	28.85	3
1	10	72	2	-0	20960	467274	47639	1382674	29.23	14.82	42	19620	13650	14.78	26.55	12
1	10	72	3	-0	1335	64036	26296	1210840	29.44	10.85	57	640	0	.00	.00	4
1	10	72	4	-0	101903	2129119	11455	457477	27.80	11.98	41	101370	0	.00	.00	19
1	10	73	1	321200	2264	121880	44312	1819871	29.35	14.24	43	1370	26860	20.12	39.81	7
1	10	73	2	-0	63107	2372094	31604	1189607	24.46	9.49	30	60920	16840	22.87	59.95	23
1	10	73	3	-0	1	0	22153	851817	-.00	-.00	-0	0	0	.00	.00	0
1	10	73	4	-0	51718	4184130	15349	456949	29.28	12.68	43	50510	24320	59.77	68.81	15
1	10	74	1	364700	12040	862934	42877	1720579	35.82	10.59	32	10130	0	.00	.00	9
1	10	74	2	-0	35506	2533188	40334	1919509	34.61	12.80	37	35065	25900	21.31	79.07	13
1	10	74	3	-0	710	68562	38190	1796014	35.37	14.69	39	550	0	.00	.00	2
1	10	74	4	-0	60914	3234119	9733	392722	38.03	12.72	31	0	0	.00	.00	16

DATA FURNISHED BY THE REGIONAL OR FOREST OFFICES

REG	FOR	FISCAL YEAR	FISCAL QTR	TOTAL SIC 24 CAPACITY	TOTAL SIC 26 CAPACITY	TOTAL CAPACITY	MILL SITE INVENTORY
1	10	64	3	168.0	104.1	272.1	-.00
1	10	64	4	168.0	104.1	272.1	-.00
1	10	65	1	168.0	104.1	272.1	-.00
1	10	65	2	168.0	104.1	272.1	-.00
1	10	65	3	147.0	170.0	317.0	-.00
1	10	65	4	147.0	170.0	317.0	-.00
1	10	66	1	147.0	170.0	317.0	-.00
1	10	66	2	147.0	170.0	317.0	-.00
1	10	66	3	179.9	166.0	345.9	-.00
1	10	66	4	179.9	166.0	345.9	-.00
1	10	67	1	179.9	166.0	345.9	-.00
1	10	67	2	179.9	166.0	345.9	-.00
1	10	67	3	179.0	170.0	349.0	-.00
1	10	67	4	179.0	170.0	349.0	-.00
1	10	68	1	179.0	170.0	349.0	-.00
1	10	68	2	179.0	170.0	349.0	-.00
1	10	68	3	187.0	230.0	417.0	-.00
1	10	68	4	187.0	230.0	417.0	-.00
1	10	69	1	187.0	230.0	417.0	-.00
1	10	69	2	187.0	230.0	417.0	-.00
1	10	69	3	173.3	202.0	375.3	-.00
1	10	69	4	173.3	202.0	375.3	-.00
1	10	70	1	173.3	202.0	375.3	-.00
1	10	70	2	173.3	202.0	375.3	-.00
1	10	70	3	173.2	190.0	363.2	-.00
1	10	70	4	173.2	190.0	363.2	-.00
1	10	71	1	173.2	190.0	363.2	-.00
1	10	71	2	173.2	190.0	363.2	-.00
1	10	71	3	192.2	180.0	372.2	-.00
1	10	71	4	192.2	180.0	372.2	-.00
1	10	72	1	192.2	180.0	372.2	-.00
1	10	72	2	192.2	180.0	372.2	-.00
1	10	72	3	192.1	192.0	384.1	-.00
1	10	72	4	192.1	192.0	384.1	-.00
1	10	73	1	192.1	192.0	384.1	-.00
1	10	73	2	192.1	192.0	384.1	-.00
1	10	73	3	215.9	214.0	429.9	-.00
1	10	73	4	215.9	214.0	429.9	-.00
1	10	74	1	215.9	214.0	429.9	-.00
1	10	74	2	215.9	214.0	429.9	-.00

DATA FURNISHED BY THE WASHINGTON OFFICE

REG	FOR	FISCAL YEAR	FISCAL QTR	UNCUT VOLUME UNDER CONTRACT	VOLUME SOLD	VALUE SOLD	VOLUME HARVESTED	VALUE HARVESTED	LOGGING COST	HAULING COST	HAUL DIST	VOLUME SOLD SUBJECT TO PRICE CHANGE: ESCALATION	RATE REDET	RATE REDET PRICE CHANGE: OLD	NEW	NO OF SALES
1	14	63	1	425600	15920	39052	07942	563535	-.00	-.00	-0	-0	-0	-.00	-.00	-0
1	14	63	2	-0	28901	132289	40588	313321	-.00	-.00	-0	-0	-0	-.00	-.00	-0
1	14	63	3	-0	76891	648163	25822	191986	-.00	-.00	-0	-0	-0	-.00	-.00	-0
1	14	63	4	-0	77706	576458	29056	217782	-.00	-.00	-0	-0	-0	-.00	-.00	-0
1	14	64	1	479500	17138	106154	49285	421919	13.01	8.89	-0	0	0	.00	.00	7
1	14	64	2	-0	73704	803473	45863	319119	12.56	8.69	-0	0	0	.00	.00	14
1	14	64	3	-0	6483	65639	41826	400397	12.75	12.61	38	3515	20820	8.65	6.53	5
1	14	64	4	-0	71940	603247	20047	151118	12.97	10.62	29	66925	45710	8.65	2.89	10
1	14	65	1	488100	19125	254975	52275	373020	13.66	11.03	16	10475	0	.00	.00	4
1	14	65	2	-0	90770	888721	46711	288431	12.57	11.61	34	88210	88260	5.44	5.92	17
1	14	65	3	-0	4773	85656	28643	329057	13.23	9.88	11	3620	31880	5.59	7.16	5
1	14	65	4	-0	54045	440709	24476	229429	12.21	9.39	24	52650	84700	6.99	4.95	6
1	14	66	1	445000	17545	62050	69636	508196	13.89	10.06	36	17045	0	.00	.00	4
1	14	66	2	-0	103160	1271996	58699	529709	12.67	12.49	27	101630	49960	4.04	6.90	19
1	14	66	3	-0	3245	39158	39048	512767	16.52	9.75	20	2065	5300	15.07	3.63	4
1	14	66	4	-0	26322	263322	24076	272646	11.84	11.10	35	25480	32435	14.27	8.40	6
1	14	67	1	435200	45630	768666	75241	912915	12.79	11.58	28	44425	0	.00	.00	9
1	14	67	2	-0	64242	1002605	49587	550426	15.02	12.54	29	62835	73325	7.40	14.10	14
1	14	67	3	-0	1700	33900	31763	260592	15.84	12.12	20	0	21720	2.12	2.42	4
1	14	67	4	-0	29514	256546	19144	240020	13.72	14.58	16	27530	56690	13.76	14.41	8
1	14	68	1	465300	8968	144986	44651	598399	14.49	8.79	17	12505	0	.00	.00	3
1	14	68	2	-0	130045	1531897	51645	661558	15.18	13.18	29	129325	34300	8.31	8.56	20
1	14	68	3	-0	1452	25798	36466	579551	17.94	6.04	10	0	10400	7.49	7.92	3
1	14	68	4	-0	51825	1192567	34586	671835	15.14	14.04	51	46530	87080	7.90	13.46	12
1	14	69	1	507700	14649	446109	55604	1178006	15.78	8.27	27	10155	0	.00	.00	7
1	14	69	2	-0	125348	5056068	52776	1136326	16.30	11.71	49	114090	43665	12.96	23.26	32
1	14	69	3	-0	488	22348	41588	1723329	17.31	12.59	67	0	4350	16.39	28.87	2
1	14	69	4	-0	59613	2347711	22384	1043459	21.59	11.44	47	48145	47940	12.04	45.43	29
1	14	70	1	568400	63175	1158638	67130	2418819	19.37	12.51	57	55645	0	.00	.00	15
1	14	70	2	-0	129068	2406861	62267	807461	19.67	10.61	43	121780	31490	8.05	11.53	24
1	14	70	3	-0	2097	32271	50453	1303450	19.20	11.04	52	0	0	.00	.00	4
1	14	70	4	-0	41000	213651	20505	428549	23.23	10.46	42	36190	59500	34.00	20.12	10
1	14	71	1	578000	36510	102688	60092	866949	21.39	10.68	42	33910	0	.00	.00	6
1	14	71	2	-0	131539	1362760	53703	1010807	22.77	10.45	40	119770	27380	12.69	12.69	16
1	14	71	3	-0	366	7677	40521	1151424	20.53	9.77	33	0	0	.00	.00	1
1	14	71	4	-0	36247	904809	37834	1213617	22.25	9.33	35	32865	38020	28.38	17.28	10
1	14	72	1	512700	1	0	62738	1790771	-.00	-.00	-0	0	26580	20.27	20.27	0
1	14	72	2	-0	6079	202428	54557	1801704	25.14	11.05	53	0	27380	13.07	27.76	8
1	14	72	3	-0	6501	110145	33334	1436625	26.53	11.12	43	5510	0	.00	.00	3
1	14	72	4	-0	97499	1738443	19617	899135	31.42	10.23	39	107085	63620	21.76	29.56	19
1	14	73	1	500000	1067	53998	60687	2481966	24.23	10.42	34	0	6330	44.74	44.74	8
1	14	73	2	-0	68586	2358185	53304	1945667	26.39	10.46	37	63560	54715	31.65	48.42	20
1	14	73	3	-0	7991	318337	32577	1379968	24.02	11.41	40	7400	0	.00	.00	4
1	14	73	4	-0	77891	3992499	18635	735815	30.76	11.09	41	76499	97060	19.03	44.24	20
1	14	74	1	552400	20298	915333	50549	1747127	32.81	15.98	70	19779	9650	56.46	67.42	6
1	14	74	2	-0	45968	2951246	63171	1824945	33.94	10.06	31	44650	28810	26.86	45.42	11
1	14	74	3	-0	31434	867195	37065	1323288	30.34	12.05	37	55790	0	.00	.00	8
1	14	74	4	-0	54190	2264240	10679	450021	34.50	9.68	25	0	37580	11.74	66.31	14

DATA FURNISHED BY THE REGIONAL OR FOREST OFFICES

REG	FOR	FISCAL YEAR	FISCAL QTR	TOTAL SIC 24 CAPACITY	TOTAL SIC 26 CAPACITY	TOTAL CAPACITY	MILL SITE INVENTORY
1	14	64	3	237.6	78.0	315.6	-.00
1	14	64	4	237.6	78.0	315.6	-.00
1	14	65	1	237.6	78.0	315.6	-.00
1	14	65	2	237.6	78.0	315.6	-.00
1	14	65	3	170.2	80.0	250.2	-.00
1	14	65	4	170.2	80.0	250.2	-.00
1	14	66	1	170.2	80.0	250.2	-.00
1	14	66	2	170.2	80.0	250.2	-.00
1	14	66	3	258.0	80.0	338.0	-.00
1	14	66	4	258.0	80.0	338.0	-.00
1	14	67	1	258.0	80.0	338.0	-.00
1	14	67	2	258.0	80.0	338.0	-.00
1	14	67	3	269.8	84.0	353.8	-.00
1	14	67	4	269.8	84.0	353.8	-.00
1	14	68	1	269.8	84.0	353.8	-.00
1	14	68	2	269.8	84.0	353.8	-.00
1	14	68	3	290.7	72.0	362.7	-.00
1	14	68	4	290.7	72.0	362.7	-.00
1	14	69	1	290.7	72.0	362.7	-.00
1	14	69	2	290.7	72.0	362.7	-.00
1	14	69	3	263.9	70.3	334.2	-.00
1	14	69	4	263.9	70.3	334.2	-.00
1	14	70	1	263.9	70.3	334.2	-.00
1	14	70	2	263.9	70.3	334.2	-.00
1	14	70	3	257.2	65.0	322.2	-.00
1	14	70	4	257.2	65.0	322.2	-.00
1	14	71	1	257.2	65.0	322.2	-.00
1	14	71	2	257.2	65.0	322.2	-.00
1	14	71	3	291.5	65.0	356.5	-.00
1	14	71	4	291.5	65.0	356.5	-.00
1	14	72	1	291.5	65.0	356.5	-.00
1	14	72	2	291.5	65.0	356.5	-.00
1	14	72	3	293.1	70.0	363.1	-.00
1	14	72	4	293.1	70.0	363.1	-.00
1	14	73	1	293.1	70.0	363.1	-.00
1	14	73	2	293.1	70.0	363.1	-.00
1	14	73	3	275.7	78.0	353.7	-.00
1	14	73	4	275.7	78.0	353.7	-.00
1	14	74	1	275.7	78.0	353.7	-.00
1	14	74	2	275.7	78.0	353.7	-.00

DATA FURNISHED BY THE WASHINGTON OFFICE

REG	FOR	FISCAL YEAR	FISCAL QTR	UNCUT VOLUME UNDER CONTRACT	VOLUME SOLD	VALUE SOLD	VOLUME HARVESTED	VALUE HARVESTED	LOGGING COST	HAULING COST	HAUL DIST	VOLUME SOLD SUBJECT TO PRICE CHANGE: ESCALATION	RATE REDET	RATE REDET PRICE CHANGE: OLD	NEW	NO OF SALES
1	16	63	1	289500	23455	193817	15645	114013	-.00	-.00	-0	-0	-0	-.00	-.00	-0
1	16	63	2	-0	28856	257441	37415	378099	-.00	-.00	-0	-0	-0	-.00	-.00	-0
1	16	63	3	-0	17640	96744	38144	353919	-.00	-.00	-0	-0	-0	-.00	-.00	-0
1	16	63	4	-0	91142	773497	45652	382901	-.00	-.00	-0	-0	-0	-.00	-.00	-0
1	16	64	1	325400	5740	68636	42724	373135	8.87	10.20	-0	0	0	.00	.00	2
1	16	64	2	-0	79460	524288	38399	312156	10.71	11.88	-0	0	0	.00	.00	9
1	16	64	3	-0	27540	224523	40316	353549	11.51	8.70	24	27540	24630	7.05	7.74	5
1	16	64	4	-0	79242	970457	32693	302797	10.04	10.72	28	79075	59150	11.24	5.48	10
1	16	65	1	345300	2610	34960	35780	346981	10.70	9.85	26	2200	28960	2.09	7.66	2
1	16	65	2	-0	42022	585933	28695	284441	10.44	9.86	23	41610	52440	6.86	6.65	7
1	16	65	3	-0	23360	231638	35927	417764	11.06	11.70	39	22935	8760	3.83	6.97	6
1	16	65	4	-0	70775	591094	38880	354348	11.93	10.04	28	70775	28500	16.11	5.62	16
1	16	66	1	398300	23550	291875	37376	365186	11.21	10.45	30	23550	27670	4.19	5.87	3
1	16	66	2	-0	33890	528463	27124	277179	11.02	10.31	26	33890	63255	9.08	10.13	6
1	16	66	3	-0	31865	296579	26832	328704	11.39	9.72	26	31865	27227	10.89	13.52	4
1	16	66	4	-0	40878	326498	31093	544013	11.50	10.03	23	40400	23954	23.48	16.80	6
1	16	67	1	394200	70246	1106355	43061	542775	12.80	10.91	34	69420	3500	9.85	9.85	11
1	16	67	2	-0	47310	642515	41225	497976	12.95	11.79	31	47310	40380	8.81	14.14	8
1	16	67	3	-0	1	0	35721	412884	-.00	-.00	-0	0	29500	7.79	7.79	0
1	16	67	4	-0	37530	422015	31710	398261	13.54	10.20	25	37530	20000	25.29	4.90	4
1	16	68	1	405900	18550	263038	37430	496222	13.66	12.13	38	18090	17454	25.63	25.63	5
1	16	68	2	-0	21860	515592	31060	387537	14.73	12.88	32	21860	77770	6.30	6.72	4
1	16	68	3	-0	19748	462549	24451	458591	13.72	13.01	38	19550	9320	9.50	9.50	5
1	16	68	4	-0	72296	1689373	37609	758144	15.55	8.68	22	71787	70830	7.60	5.08	15
1	16	69	1	413900	13500	389767	49521	1180910	15.46	9.14	28	13500	45429	15.22	24.27	2
1	16	69	2	-0	107113	5478466	38709	1052423	16.48	8.41	25	106760	137840	8.65	22.60	15
1	16	69	3	-0	4740	249553	36096	1687169	15.72	6.51	11	4740	9320	9.53	28.77	1
1	16	69	4	-0	21925	1148796	35804	1730500	19.70	10.66	34	20500	8300	18.19	53.95	8
1	16	70	1	635400	182850	1200367	49466	1434233	18.06	8.79	65	7870	7560	10.33	51.78	3
1	16	70	2	-0	136310	2553147	50992	1413824	20.55	10.28	36	123270	98410	20.23	21.85	24
1	16	70	3	-0	1139	19646	30300	971896	21.15	7.94	14	0	39560	29.15	30.57	3
1	16	70	4	-0	38651	203228	24770	460855	22.45	5.70	37	35840	77460	8.53	8.00	8
1	16	71	1	413400	5210	11090	40090	757086	21.52	6.61	12	5210	0	.00	.00	1
1	16	71	2	-0	53877	764639	32215	435485	23.66	9.32	30	49110	115405	20.86	20.86	11
1	16	71	3	-0	16216	243884	23475	415823	23.71	9.66	30	14940	46020	21.82	21.82	5
1	16	71	4	-0	26380	513278	34799	993755	26.38	8.93	21	26040	41220	27.64	27.64	5
1	16	72	1	359900	417	9662	49719	1689782	27.40	9.77	16	0	600	40.58	40.58	2
1	16	72	2	-0	7484	267224	45590	1762260	28.41	8.77	29	7030	56200	34.58	36.62	2
1	16	72	3	-0	100	4563	18813	874441	6.47	15.00	34	0	34520	26.64	31.50	1
1	16	72	4	-0	70203	2218255	34556	1394929	30.12	9.26	35	67540	117330	29.82	37.99	16
1	16	73	1	303000	156	2292	41143	1645502	26.44	7.47	5	0	0	.00	.00	1
1	16	73	2	-0	21560	761913	28167	1140740	32.65	9.84	34	21560	64700	41.53	56.61	6
1	16	73	3	-0	1004	39552	25722	1022531	42.52	10.10	24	0	17320	29.51	42.97	3
1	16	73	4	-0	40373	2667099	2292	1301791	32.60	7.91	27	58950	68210	20.50	51.90	16
1	16	74	1	279300	3023	186004	28607	1656223	33.56	7.32	18	2170	16950	47.53	77.05	5
1	16	74	2	-0	66991	2941343	33083	1670205	46.40	8.55	27	65350	57180	51.18	70.82	23
1	16	74	3	-0	847	36591	22450	1090300	45.91	8.71	22	0	26950	33.44	62.43	3
1	16	74	4	-0	22746	801344	26799	1461641	40.73	9.73	17	0	25230	31.43	60.85	6

DATA FURNISHED BY THE REGIONAL OR FOREST OFFICES

REG	FOR	FISCAL YEAR	FISCAL QTR	TOTAL SIC 24 CAPACITY	TOTAL SIC 26 CAPACITY	TOTAL CAPACITY	MILL SITE INVENTORY
1	16	64	3	471.8	125.0	596.8	-.00
1	16	64	4	471.8	125.0	596.8	-.00
1	16	65	1	471.8	125.0	596.8	-.00
1	16	65	2	471.8	125.0	596.8	-.00
1	16	65	3	440.7	150.0	590.7	-.00
1	16	65	4	440.7	150.0	590.7	-.00
1	16	66	1	440.7	150.0	590.7	-.00
1	16	66	2	440.7	150.0	590.7	-.00
1	16	66	3	454.2	150.0	604.2	-.00
1	16	66	4	454.2	150.0	604.2	-.00
1	16	67	1	454.2	150.0	604.2	-.00
1	16	67	2	454.2	150.0	604.2	-.00
1	16	67	3	448.2	150.0	598.2	-.00
1	16	67	4	448.2	150.0	598.2	-.00
1	16	68	1	448.2	150.0	598.2	-.00
1	16	68	2	448.2	150.0	598.2	-.00
1	16	68	3	497.9	150.0	647.9	-.00
1	16	68	4	497.9	150.0	647.9	-.00
1	16	69	1	497.9	150.0	647.9	-.00
1	16	69	2	497.9	150.0	647.9	-.00
1	16	69	3	456.3	120.0	576.3	-.00
1	16	69	4	456.3	120.0	576.3	-.00
1	16	70	1	456.3	120.0	576.3	-.00
1	16	70	2	456.3	120.0	576.3	-.00
1	16	70	3	394.4	112.0	506.4	-.00
1	16	70	4	394.4	112.0	506.4	-.00
1	16	71	1	394.4	112.0	506.4	-.00
1	16	71	2	394.4	112.0	506.4	-.00
1	16	71	3	440.1	110.0	550.1	-.00
1	16	71	4	440.1	110.0	550.1	-.00
1	16	72	1	440.1	110.0	550.1	-.00
1	16	72	2	440.1	110.0	550.1	-.00
1	16	72	3	385.1	121.0	506.1	-.00
1	16	72	4	385.1	121.0	506.1	-.00
1	16	73	1	385.1	121.0	506.1	-.00
1	16	73	2	385.1	121.0	506.1	-.00
1	16	73	3	485.7	135.0	620.7	-.00
1	16	73	4	485.7	135.0	620.7	-.00
1	16	74	1	485.7	135.0	620.7	-.00
1	16	74	2	485.7	135.0	620.7	-.00

DATA FURNISHED BY THE WASHINGTON OFFICE

REG	FOR	FISCAL YEAR	FISCAL QTR	UNCUT VOLUME UNDER CONTRACT	VOLUME SOLD	VALUE SOLD	VOLUME HARVESTED	VALUE HARVESTED	LOGGING COST	HAULING COST	HAUL DIST	VOLUME SOLD SUBJECT TO ESCALATION	VOLUME SOLD SUBJECT TO RATE REDET	RATE REDET PRICE CHANGE OLD	RATE REDET PRICE CHANGE NEW	NO OF SALES
2	6	63	1	277000	1	0	8482	28458	-.00	-.00	-0	-0	-0	-.00	-.00	-0
2	6	63	2	-0	1	0	10527	37926	-.00	-.00	-0	-0	-0	-.00	-.00	-0
2	6	63	3	-0	73648	152558	5602	25161	-.00	-.00	-0	-0	-0	-.00	-.00	-0
2	6	63	4	-0	49466	101251	2255	9497	-.00	-.00	-0	-0	-0	-.00	-.00	-0
2	6	64	1	275600	36200	81800	10882	35220	13.54	11.53	-0	0	0	.00	.00	2
2	6	64	2	-0	1	0	9775	34507	-.00	-.00	-0	0	0	.00	.00	0
2	6	64	3	-0	16300	33760	8239	23048	15.87	8.50	5	0	0	.00	.00	1
2	6	64	4	-0	772	2647	2489	5977	13.51	9.75	37	0	0	.00	.00	2
2	6	65	1	236500	1	0	13042	39627	-.00	-.00	-0	0	0	.00	.00	0
2	6	65	2	-0	10581	23202	8198	26099	15.11	11.31	24	6174	10946	3.20	3.20	3
2	6	65	3	-0	1	0	5250	14925	-.00	-.00	-0	0	0	.00	.00	0
2	6	65	4	-0	2900	5800	1753	3506	16.26	6.36	26	0	0	.00	.00	1
2	0	66	1	237600	5831	20711	16762	106493	-.00	-.00	-0	0	0	.00	.00	0
2	6	66	2	-0	1	0	6109	15100	-.00	-.00	-0	0	0	.00	.00	0
2	6	66	3	-0	1	0	4390	10972	-.00	-.00	-0	0	0	.00	.00	0
2	6	66	4	-0	2850	15930	4317	10072	14.99	6.64	7	2850	0	.00	.00	1
2	6	67	1	183000	1	0	14384	53877	-.00	-.00	-0	0	0	.00	.00	0
2	6	67	2	-0	2940	16817	8327	41004	14.96	9.99	13	2940	0	.00	.00	1
2	6	67	3	-0	6346	18086	2035	4401	-.00	-.00	-0	0	0	.00	.00	0
2	6	67	4	-0	6658	15646	1529	3093	15.23	10.44	22	6346	0	.00	.00	2
2	6	68	1	201500	1	0	11794	45831	-.00	-.00	-0	0	22275	2.00	3.01	0
2	6	68	2	-0	1	0	7125	25737	-.00	-.00	-0	0	10338	2.00	2.00	0
2	6	68	3	-0	1337	7420	2340	11199	16.58	7.50	26	1337	0	.00	.00	1
2	6	68	4	-0	12794	152757	540	2063	15.26	6.99	41	12794	0	.00	.00	3
2	6	69	1	184300	1820	9786	6191	62560	16.15	9.74	33	0	0	.00	.00	1
2	6	69	2	-0	10129	234072	10227	90785	14.59	7.87	23	8750	22275	3.01	20.58	2
2	6	69	3	-0	1	0	5580	103372	-.00	-.00	-0	0	0	.00	.00	0
2	6	69	4	-0	24140	850903	2866	45000	15.03	11.37	26	24140	0	.00	.00	3
2	6	70	1	230450	6000	12000	11437	208482	23.34	16.32	36	0	0	.00	.00	2
2	6	70	2	-0	28078	176788	7457	22938	16.80	12.32	24	20220	31000	3.71	4.44	6
2	6	70	3	-0	753	4525	2996	18987	16.41	10.77	22	6210	0	.00	.00	2
2	6	70	4	-0	8585	16095	1183	6525	18.95	11.12	27	5950	0	.00	.00	2
2	6	71	1	197350	1	0	13156	95230	-.00	-.00	-0	0	0	.00	.00	0
2	6	71	2	-0	1	0	11396	70441	-.00	-.00	-0	0	0	.00	.00	0
2	6	71	3	-0	1850	4070	4246	27245	20.60	12.86	35	0	77209	18.47	3.00	1
2	6	71	4	-0	11150	25417	2654	40091	20.11	12.45	30	13000	0	.00	.00	3
2	6	72	1	133600	1	0	13097	208265	-.00	-.00	-0	0	0	.00	.00	0
2	6	72	2	-0	1	0	12687	171571	-.00	-.00	-0	0	0	.00	.00	0
2	6	72	3	-0	1	0	4525	95998	-.00	-.00	-0	0	0	.00	.00	0
2	6	72	4	-0	8335	248809	3168	50966	21.93	12.03	36	7063	0	.00	.00	5
2	6	73	1	82900	1	0	17156	305469	-.00	-.00	-0	0	0	.00	.00	0
2	6	73	2	-0	1581	54228	11451	246099	22.80	20.38	70	1581	0	.00	.00	1
2	6	73	3	-0	4500	44685	2543	126022	21.50	12.45	25	4500	29960	25.31	44.57	1
2	6	73	4	-0	11347	277327	1295	48977	25.55	12.97	18	11347	0	.00	.00	4
2	6	74	1	75550	2050	80983	10770	283462	33.40	16.20	19	5910	0	.00	.00	2
2	6	74	2	-0	7290	91029	10818	341995	32.92	16.72	52	3430	0	.00	.00	1
2	6	74	3	-0	13735	227527	3882	110028	33.25	15.83	33	9617	51005	16.05	43.46	3
2	6	74	4	-0	7325	59843	3309	88583	34.52	15.39	37	0	0	.00	.00	3

DATA FURNISHED BY THE REGIONAL OR FOREST OFFICES

REG	FOR	FISCAL YEAR	FISCAL QTR	TOTAL SIC 24 CAPACITY	TOTAL SIC 26 CAPACITY	TOTAL CAPACITY	MILL SITE INVENTORY
2	6	64	3	176.0	.0	176.0	1.80
2	6	64	4	176.0	.0	176.0	.80
2	6	65	1	176.0	.0	176.0	.35
2	6	65	2	176.0	.0	176.0	1.75
2	6	65	3	176.0	.0	176.0	1.80
2	6	65	4	176.0	.0	176.0	.70
2	0	66	1	176.0	.0	176.0	.40
2	6	66	2	176.0	.0	176.0	1.70
2	6	66	3	176.0	.0	176.0	1.60
2	6	66	4	176.0	.0	176.0	.70
2	6	67	1	176.0	.0	176.0	.30
2	6	67	2	176.0	.0	176.0	1.50
2	6	67	3	176.0	.0	176.0	1.40
2	6	67	4	176.0	.0	176.0	.60
2	6	68	1	216.0	.0	216.0	.30
2	6	68	2	216.0	.0	216.0	1.40
2	6	68	3	216.0	.0	216.0	1.10
2	6	68	4	216.0	.0	216.0	.50
2	6	69	1	216.0	.0	216.0	.30
2	6	69	2	216.0	.0	216.0	1.35
2	6	69	3	216.0	.0	216.0	1.30
2	6	69	4	216.0	.0	216.0	.50
2	6	70	1	216.0	.0	216.0	.30
2	6	70	2	216.0	.0	216.0	1.30
2	6	70	3	216.0	.0	216.0	1.60
2	6	70	4	216.0	.0	216.0	.50
2	6	71	1	216.0	.0	216.0	.25
2	6	71	2	216.0	.0	216.0	1.50
2	6	71	3	216.0	.0	216.0	1.40
2	6	71	4	216.0	.0	216.0	.60
2	6	72	1	216.0	.0	216.0	.30
2	6	72	2	216.0	.0	216.0	1.30
2	6	72	3	216.0	.0	216.0	1.00
2	6	72	4	216.0	.0	216.0	.50
2	6	73	1	216.0	.0	216.0	.25
2	6	73	2	216.0	.0	216.0	.80
2	6	73	3	216.0	.0	216.0	.70
2	6	73	4	216.0	.0	216.0	.30
2	6	74	1	216.0	.0	216.0	.15
2	6	74	2	216.0	.0	216.0	.50

DATA FURNISHED BY THE WASHINGTON OFFICE

REG	FOR	FISCAL YEAR	FISCAL QTR	UNCUT VOLUME UNDER CONTRACT	VOLUME SOLD	VALUE SOLD	VOLUME HARVESTED	VALUE HARVESTED	LOGGING COST	HAULING COST	HAUL DIST	VOLUME SOLD SUBJECT TO RATE REDET: ESCALATION	VOLUME SOLD SUBJECT TO RATE REDET: RATE REDET	RATE REDET PRICE CHANGE: OLD	RATE REDET PRICE CHANGE: NEW	NO OF SALES
2	9	63	1	137300	3205	6410	1722	7694	-.00	-.00	-0	-0	-0	-.00	-.00	-0
2	9	63	2	-0	28680	80099	2827	11384	-.00	-.00	-0	-0	-0	-.00	-.00	-0
2	9	63	3	-0	2248	4496	1303	3568	-.00	-.00	-0	-0	-0	-.00	-.00	-0
2	9	63	4	-0	9600	19200	1745	5746	-.00	-.00	-0	-0	-0	-.00	-.00	-0
2	9	64	1	132400	1	0	6455	27178	-.00	-.00	-0	0	0	.00	.00	0
2	9	64	2	-0	50255	104035	3662	17521	14.37	6.37	-0	0	0	.00	.00	3
2	9	64	3	-0	10305	20610	160	683	13.68	7.41	44	10305	0	.00	.00	1
2	9	64	4	-0	1	0	586	1551	-.00	-.00	-0	0	0	.00	.00	0
2	9	65	1	141900	661	3020	4552	18349	14.19	6.93	59	0	0	.00	.00	1
2	9	65	2	-0	1	0	5455	17744	-.00	-.00	-0	0	40349	6.33	6.33	0
2	9	65	3	-0	398	2165	121	2049	16.88	9.10	45	0	0	.00	.00	1
2	9	65	4	-0	6290	18834	1673	5643	15.30	8.95	46	6290	0	.00	.00	2
2	9	66	1	111000	1	0	6469	22350	-.00	-.00	-0	0	0	.00	.00	0
2	9	66	2	-0	1	0	6607	28962	-.00	-.00	-0	0	28928	2.27	4.84	0
2	9	66	3	-0	1	0	1447	814	-.00	-.00	-0	0	3585	14.55	14.55	0
2	9	66	4	-0	1	0	1839	4810	-.00	-.00	-0	0	0	.00	.00	0
2	9	67	1	88600	1	0	9566	70295	-.00	-.00	-0	0	0	.00	.00	0
2	9	67	2	-0	7768	45631	8703	49853	14.97	10.46	46	7768	20630	4.00	2.84	2
2	9	67	3	-0	1	0	4413	12872	-.00	-.00	-0	0	0	.00	.00	0
2	9	67	4	-0	1	0	6108	22956	.00	.00	0	0	18150	2.05	2.05	0
2	9	68	1	117600	5300	11289	7019	52101	15.79	8.28	2	0	0	.00	.00	1
2	9	68	2	-0	20586	101485	7711	69264	15.63	7.70	23	16600	0	.00	.00	4
2	9	68	3	-0	8700	42978	2365	15613	15.79	9.73	45	8700	18749	6.03	6.03	1
2	9	68	4	-0	19500	149208	2227	29903	14.56	9.81	37	15460	0	.00	.00	5
2	9	69	1	128000	1	0	12144	194779	-.00	-.00	-0	0	28750	3.03	19.37	0
2	9	69	2	-0	3825	50190	10874	139943	12.89	7.88	31	3230	9600	4.15	20.83	3
2	9	69	3	-0	1	0	3282	62553	-.00	-.00	-0	0	0	.00	.00	0
2	9	69	4	-0	38200	1463079	1399	36887	14.41	8.83	33	38200	0	.00	.00	5
2	9	70	1	121750	1	0	6326	37821	-.00	-.00	-0	0	0	.00	.00	0
2	9	70	2	-0	39650	889002	5361	29929	17.42	10.78	39	26600	0	.00	.00	5
2	9	70	3	-0	1100	4353	2718	12345	16.77	7.77	24	0	35794	7.83	10.26	1
2	9	70	4	-0	1	0	2153	8882	-.00	-.00	-0	0	7845	2.06	2.06	0
2	9	71	1	87300	1	0	7847	91445	-.00	-.00	-0	0	0	.00	.00	0
2	9	71	2	-0	1	0	7316	73868	-.00	-.00	-0	0	0	.00	.00	0
2	9	71	3	-0	11000	22000	6720	71293	20.26	11.60	36	11000	23009	26.93	26.93	5
2	9	71	4	-0	1	0	1849	27313	-.00	-.00	-0	0	0	.00	.00	0
2	9	72	1	91600	1	0	8392	242449	-.00	-.00	-0	0	0	.00	.00	0
2	9	72	2	-0	525	12876	7715	211151	16.31	9.38	19	0	1660	6.18	6.18	1
2	9	72	3	-0	10282	103379	5355	170885	23.08	10.16	25	9250	5600	7.95	22.82	4
2	9	72	4	-0	7400	148714	5756	187597	22.66	10.76	29	7400	0	.00	.00	3
2	9	73	1	64600	973	15402	8826	267857	16.31	15.28	54	0	0	.00	.00	1
2	9	73	2	-0	5834	200020	4680	175014	22.52	11.29	22	5470	0	.00	.00	5
2	9	73	3	-0	1	0	3303	34257	-.00	-.00	-0	0	21800	41.48	52.76	0
2	9	73	4	-0	7543	292714	2325	17731	24.24	21.11	59	7750	0	.00	.00	4
2	9	74	1	52850	876	19893	10029	410205	33.77	11.46	29	500	0	.00	.00	2
2	9	74	2	-0	1	0	9872	367881	-.00	-.00	-0	0	0	.00	.00	0
2	9	74	3	-0	4027	76051	1496	2955	31.30	10.68	28	3500	13000	21.12	57.86	4
2	9	74	4	-0	6499	162506	5649	227351	32.43	10.16	11	0	2700	2.02	25.40	4

DATA FURNISHED BY THE WASHINGTON OFFICE

REG	FOR	FISCAL YEAR	FISCAL QTR	UNCUT VOLUME UNDER CONTRACT	VOLUME SOLD	VALUE SOLD	VOLUME HARVESTED	VALUE HARVESTED	LOGGING COST	HAULING COST	HAUL DIST	VOLUME SOLD SUBJECT TO ESCALATION	VOLUME SOLD SUBJECT TO RATE REDET	RATE REDET PRICE CHANGE OLD	RATE REDET PRICE CHANGE NEW	NO OF SALES
2	11	63	1	80660	1500	3000	8860	37320	-.00	-.00	-0	-0	-0	-.00	-.00	-0
2	11	63	2	-0	1	0	11808	44546	-.00	-.00	-0	-0	-0	-.00	-.00	-0
2	11	63	3	-0	22744	45131	1110	4967	-.00	-.00	-0	-0	-0	-.00	-.00	-0
2	11	63	4	-0	38469	197310	2398	14890	-.00	-.00	-0	-0	-0	-.00	-.00	-0
2	11	64	1	88300	545	1090	13962	69812	13.72	7.40	-0	0	0	.00	.00	1
2	11	64	2	-0	1	0	12162	49098	-.00	-.00	-0	0	0	.00	.00	0
2	11	64	3	-0	8946	21688	131	12063	14.44	7.64	48	0	0	.00	.00	1
2	11	64	4	-0	24729	82154	901	3237	12.89	7.90	34	29803	0	.00	.00	2
2	11	65	1	117000	12371	54979	15166	53379	12.69	7.25	31	5074	0	.00	.00	1
2	11	65	2	-0	3520	7040	12583	42078	14.80	6.96	27	10817	0	.00	.00	3
2	11	65	3	-0	2641	5378	4254	18489	14.80	2.96	16	2641	0	.00	.00	1
2	11	65	4	-0	22600	98775	2386	6075	14.80	4.42	24	22600	0	.00	.00	1
2	11	66	1	103100	1	0	14791	50251	-.00	-.00	-0	0	0	.00	.00	0
2	11	66	62	-0	1740	3480	11232	40898	14.99	4.61	16	0	19268	2.03	4.86	1
2	11	66	3	-0	5700	11060	6427	31931	17.99	6.07	24	0	0	.00	.00	1
2	11	66	4	-0	9300	25094	3003	20636	14.99	8.76	36	0	18230	6.43	9.59	1
2	11	67	1	80350	12200	24400	12825	116252	14.99	7.21	32	0	0	.00	.00	1
2	11	67	2	-0	1	0	12117	57802	.00	.00	0	0	39084	4.21	8.42	0
2	11	67	3	-0	1	0	3976	15384	.00	.00	0	0	0	.00	.00	0
2	11	67	4	-0	1	0	2387	8938	.00	.00	0	0	0	.00	.00	0
2	11	68	1	84650	14825	73289	7105	50315	15.32	7.80	25	9200	22982	3.16	5.07	2
2	11	68	2	-0	1	0	12228	84057	.00	.00	0	0	7297	3.93	3.93	1
2	11	68	3	-0	1	0	5452	66257	-.00	-.00	-0	0	0	.00	.00	0
2	11	68	4	-0	17348	177160	631	9645	14.03	10.58	31	15000	0	.00	.00	2
2	11	69	1	68850	11400	101460	13455	139640	14.66	11.85	42	11400	0	.00	.00	1
2	11	69	2	-0	2434	47463	13910	86083	14.32	12.86	31	2434	0	.00	.00	1
2	11	69	3	-0	1	0	6743	123278	-.00	-.00	-0	0	19856	10.39	26.83	0
2	11	69	4	-0	711	36536	826	20008	.00	.00	0	0	22600	4.42	35.11	0
2	11	70	1	70850	11560	119858	14562	147816	15.45	12.70	37	17360	22982	4.97	51.51	4
2	11	70	2	-0	22843	63326	11207	106513	16.89	12.56	38	22550	0	.00	.00	5
2	11	70	3	-0	1	0	6470	17548	-.00	-.00	-0	0	9486	4.92	13.66	0
2	11	70	4	-0	12400	33036	1196	16466	18.73	10.46	37	12400	11400	12.65	12.65	2
2	11	71	1	74200	7200	14400	17199	185154	19.50	8.75	31	7200	0	.00	.00	1
2	11	71	2	-0	5300	10600	10953	50680	19.09	10.13	39	5300	0	.00	.00	1
2	11	71	3	-0	15600	31200	2937	10552	18.15	9.68	34	15600	0	.00	.00	2
2	11	71	4	-0	2800	5600	1479	10877	20.39	8.78	27	2800	0	.00	.00	1
2	11	72	1	95050	1	0	9949	156885	-.00	-.00	-0	0	0	.00	.00	0
2	11	72	2	-0	1	0	6399	56099	.00	.00	0	0	0	.00	.00	0
2	11	72	3	-0	1200	2400	3458	7643	22.80	11.38	36	1200	9486	12.43	12.43	1
2	11	72	4	-0	43872	619096	791	1745	22.72	16.81	67	42800	0	.00	.00	5
2	11	73	1	85450	1	0	12393	160510	-.00	-.00	-0	0	0	.00	.00	0
2	11	73	2	-0	1845	24123	4572	20764	26.83	13.14	33	683	2760	19.56	13.65	1
2	11	73	3	-0	1	0	3009	49489	-.00	-.00	-0	0	0	.00	.00	0
2	11	73	4	-0	6500	476510	831	6231	22.60	19.19	45	6500	0	.00	.00	2
2	11	74	1	78100	850	4199	12175	193417	18.66	7.56	20	0	0	.00	.00	1
2	11	74	2	-0	7150	126241	7135	91481	33.49	17.80	54	7150	4050	10.41	44.17	3
2	11	74	3	-0	1	0	1882	44467	28.89	14.94	36	5346	0	.00	.00	1
2	11	74	4	-0	12996	100005	955	5048	33.04	13.09	30	0	0	.00	.00	4

DATA FURNISHED BY THE REGIONAL OR FOREST OFFICES

REG	FOR	FISCAL YEAR	FISCAL QTR	TOTAL SIC 24 CAPACITY	TOTAL SIC 26 CAPACITY	TOTAL CAPACITY	MILL SITE INVENTORY
2	11	64	3	295.5	.0	295.5	1.80
2	11	64	4	295.5	.0	295.5	.80
2	11	65	1	295.5	.0	295.5	.35
2	11	65	2	295.5	.0	295.5	2.00
2	11	65	3	295.5	.0	295.5	1.80
2	11	65	4	295.5	.0	295.5	.80
2	11	66	1	295.5	.0	295.5	.35
2	11	66	2	295.5	.0	295.5	2.00
2	11	66	3	295.5	.0	295.5	1.80
2	11	66	4	295.5	.0	295.5	.80
2	11	67	1	295.5	.0	295.5	.35
2	11	67	2	295.5	.0	295.5	2.00
2	11	67	3	295.5	.0	295.5	1.80
2	11	67	4	295.5	.0	295.5	.80
2	11	68	1	295.5	.0	295.5	.35
2	11	68	2	295.5	.0	295.5	2.00
2	11	68	3	295.5	.0	295.5	1.80
2	11	68	4	295.5	.0	295.5	.80
2	11	69	1	295.5	.0	295.5	.35
2	11	69	2	295.5	.0	295.5	2.00
2	11	69	3	295.5	.0	295.5	1.80
2	11	69	4	295.5	.0	295.5	.80
2	11	70	1	295.5	.0	295.5	.35
2	11	70	2	295.5	.0	295.5	2.00
2	11	70	3	295.5	.0	295.5	1.80
2	11	70	4	295.5	.0	295.5	.80
2	11	71	1	295.5	.0	295.5	.35
2	11	71	2	295.5	.0	295.5	2.00
2	11	71	3	295.5	.0	295.5	1.80
2	11	71	4	295.5	.0	295.5	.80
2	11	72	1	295.5	.0	295.5	.35
2	11	72	2	295.5	.0	295.5	2.00
2	11	72	3	295.5	.0	295.5	1.80
2	11	72	4	295.5	.0	295.5	.80
2	11	73	1	295.5	.0	295.5	.35
2	11	73	2	295.5	.0	295.5	2.00
2	11	73	3	295.5	.0	295.5	1.90
2	11	73	4	295.5	.0	295.5	.95
2	11	74	1	295.5	.0	295.5	.50
2	11	74	2	295.5	.0	295.5	2.25

DATA FURNISHED BY THE REGIONAL OR FOREST OFFICES

REG	FOR	FISCAL YEAR	FISCAL QTR	TOTAL SIC 24 CAPACITY	TOTAL SIC 26 CAPACITY	TOTAL CAPACITY	MILL SITE INVENTORY
5	15	64	3	.0	.0	.0	-.00
5	15	64	4	.0	.0	.0	-.00
5	15	65	1	.0	.0	.0	-.00
5	15	65	2	.0	.0	.0	-.00
5	15	65	3	.0	.0	.0	-.00
5	15	65	4	.0	.0	.0	-.00
5	15	66	1	.0	.0	.0	-.00
5	15	66	2	.0	.0	.0	-.00
5	15	66	3	.0	.0	.0	-.00
5	15	66	4	.0	.0	.0	-.00
5	15	67	1	.0	.0	.0	-.00
5	15	67	2	.0	.0	.0	-.00
5	15	67	3	.0	.0	.0	-.00
5	15	67	4	.0	.0	.0	-.00
5	15	68	1	.0	.0	.0	-.00
5	15	68	2	.0	.0	.0	-.00
5	15	68	3	.0	.0	.0	-.00
5	15	68	4	.0	.0	.0	-.00
5	15	69	1	.0	.0	.0	-.00
5	15	69	2	.0	.0	.0	-.00
5	15	69	3	.0	.0	.0	-.00
5	15	69	4	.0	.0	.0	-.00
5	15	70	1	.0	.0	.0	-.00
5	15	70	2	.0	.0	.0	-.00
5	15	70	3	.0	.0	.0	-.00
5	15	70	4	.0	.0	.0	-.00
5	15	71	1	.0	.0	.0	-.00
5	15	71	2	.0	.0	.0	-.00
5	15	71	3	.0	.0	.0	-.00
5	15	71	4	.0	.0	.0	-.00
5	15	72	1	.0	.0	.0	-.00
5	15	72	2	.0	.0	.0	-.00
5	15	72	3	.0	.0	.0	-.00
5	15	72	4	.0	.0	.0	-.00
5	15	73	1	.0	.0	.0	-.00
5	15	73	2	.0	.0	.0	-.00
5	15	73	3	.0	.0	.0	-.00
5	15	73	4	.0	.0	.0	-.00
5	15	74	1	.0	.0	.0	-.00
5	15	74	2	.0	.0	.0	-.00

DATA FURNISHED BY THE WASHINGTON OFFICE

REG	FOR	FISCAL YEAR	FISCAL QTR	UNCUT VOLUME UNDER CONTRACT	VOLUME SOLD	VALUE SOLD	VOLUME HARVESTED	VALUE HARVESTED	LOGGING COST	HAULING COST	HAUL DIST	VOLUME SOLD SUBJECT TO PRICE CHANGE: ESCALATION	RATE REDET	RATE REDET PRICE CHANGE: OLD	NEW	NO OF SALES
5	16	63	1	169000	19075	163807	21875	259440	-.00	-.00	-0	-0	-0	-.00	-.00	-0
5	16	63	2	-0	17238	159553	19598	130037	-.00	-.00	-0	-0	-0	-.00	-.00	-0
5	16	63	3	-0	14900	355010	1821	16142	-.00	-.00	-0	-0	-0	-.00	-.00	-0
5	16	63	4	-0	100279	591230	9292	84091	-.00	-.00	-0	-0	-0	-.00	-.00	-0
5	16	64	1	165000	3455	29686	71413	575574	-.00	-.00	-0	0	0	.00	.00	0
5	16	64	2	-0	22555	289170	38795	308929	10.00	11.39	-0	0	0	.00	.00	2
5	16	64	3	-0	9700	89771	5004	43833	10.03	12.58	32	9200	0	.00	.00	2
5	16	64	4	-0	120745	752342	29666	328916	10.00	14.40	47	119715	0	.00	.00	12
5	16	65	1	295200	1	0	74871	576264	-.00	-.00	-0	0	0	.00	.00	0
5	16	65	2	-0	1	0	24195	184020	-.00	-.00	-0	0	64100	5.63	6.71	0
5	16	65	3	-0	43180	390170	6467	52443	10.22	11.28	36	43180	0	.00	.00	5
5	16	65	4	-0	94938	1223814	22081	273348	10.39	12.44	40	93905	0	.00	.00	12
5	16	66	1	260600	1	0	72097	591679	-.00	-.00	-0	0	0	.00	.00	0
5	16	66	2	-0	15382	263094	39092	328060	10.16	10.43	27	15100	0	.00	.00	2
5	16	66	3	-0	54900	381569	3143	19776	10.12	13.15	42	54900	0	.00	.00	4
5	16	66	4	-0	84400	1081907	51946	606372	10.17	12.49	42	84400	0	.00	.00	7
5	16	67	1	320200	925	14581	79986	1108993	11.47	11.14	30	925	0	.00	.00	1
5	16	67	2	-0	33800	595853	32264	429731	9.41	11.06	29	32700	13500	8.96	13.50	4
5	16	67	3	-0	29630	434425	6276	78327	9.27	12.81	31	29300	0	.00	.00	3
5	16	67	4	-0	79700	425172	20142	163039	9.09	13.05	46	79600	0	.00	.00	8
5	16	68	1	282400	4533	81568	51795	431189	9.36	8.15	23	3600	0	.00	.00	3
5	16	68	2	-0	1	0	52067	635438	-.00	-.00	-0	0	0	.00	.00	0
5	16	68	3	-0	21844	338056	32452	428166	9.02	14.79	50	20220	0	.00	.00	5
5	16	68	4	-0	106458	1316392	38600	599168	10.20	12.45	40	104480	0	.00	.00	12
5	16	69	1	216600	31785	866603	75767	1122646	10.32	11.58	32	29220	0	.00	.00	11
5	16	69	2	-0	15700	553339	51240	1004935	9.98	11.64	36	15700	23430	16.18	28.28	2
5	16	69	3	-0	440	16094	27853	710788	11.78	9.21	27	0	0	.00	.00	2
5	16	69	4	-0	73440	4385857	32807	915113	9.61	14.05	44	73440	0	.00	.00	6
5	16	70	1	239400	309	2218	43678	1252805	12.24	15.46	50	0	0	.00	.00	1
5	16	70	2	-0	32620	683357	35524	1015067	7.85	17.70	55	32620	0	.00	.00	4
5	16	70	3	-0	10396	241694	27864	738293	11.40	12.60	30	8200	0	.00	.00	7
5	16	70	4	-0	16116	296063	24319	703491	9.72	14.23	39	78210	0	.00	.00	14
5	16	71	1	182900	10057	270909	37440	826511	10.77	12.76	35	9900	0	.00	.00	2
5	16	71	2	-0	62646	911074	36671	723574	10.00	14.41	42	61800	0	.00	.00	7
5	16	71	3	-0	1	0	29853	757446	-.00	-.00	-0	0	0	.00	.00	0
5	16	71	4	-0	55266	1146958	33074	926067	12.43	14.49	38	46550	0	.00	.00	10
5	16	72	1	238000	42150	1027351	37775	1203400	10.74	14.03	40	41200	0	.00	.00	5
5	16	72	2	-0	1	0	52250	1480252	-.00	-.00	-0	0	0	.00	.00	0
5	16	72	3	-0	37097	1511996	37291	1215937	11.96	16.15	48	36700	0	.00	.00	3
5	16	72	4	-0	54943	3700323	33825	1356441	12.66	15.42	51	51820	0	.00	.00	7
5	16	73	1	268500	3021	107039	45866	1209150	14.95	19.75	36	2980	0	.00	.00	5
5	16	73	2	-0	438	31878	40469	1696436	15.41	14.00	40	0	0	.00	.00	3
5	16	73	3	-0	23570	3243366	39546	1605395	15.22	14.73	44	22346	0	.00	.00	8
5	16	73	4	-0	101058	13266969	36093	2173791	17.70	15.84	40	100724	0	.00	.00	12
5	16	74	1	296600	24417	2391807	30669	3219629	16.22	14.38	35	22660	11500	148.69	144.38	11
5	16	74	2	-0	120470	2252233	6837	451717	17.81	16.77	40	120000	0	.00	.00	9
5	16	74	3	-0	42600	954704	14754	1368263	18.71	19.05	37	42600	0	.00	.00	5
5	16	74	4	-0	9600	176998	26211	912750	17.69	20.04	38	0	0	.00	.00	1

DATA FURNISHED BY THE REGIONAL OR FOREST OFFICES

REG	FOR	FISCAL YEAR	FISCAL QTR	TOTAL SIC 24 CAPACITY	TOTAL SIC 26 CAPACITY	TOTAL CAPACITY	MILL SITE INVENTORY
5	16	64	3	.0	.0	.0	-.00
5	16	64	4	.0	.0	.0	-.00
5	16	65	1	.0	.0	.0	-.00
5	16	65	2	.0	.0	.0	-.00
5	16	65	3	.0	.0	.0	-.00
5	16	65	4	.0	.0	.0	-.00
5	16	66	1	.0	.0	.0	-.00
5	16	66	2	.0	.0	.0	-.00
5	16	66	3	.0	.0	.0	-.00
5	16	66	4	.0	.0	.0	-.00
5	16	67	1	.0	.0	.0	-.00
5	16	67	2	.0	.0	.0	-.00
5	16	67	3	.0	.0	.0	-.00
5	16	67	4	.0	.0	.0	-.00
5	16	68	1	.0	.0	.0	-.00
5	16	68	2	.0	.0	.0	-.00
5	16	68	3	.0	.0	.0	-.00
5	16	68	4	.0	.0	.0	-.00
5	16	69	1	.0	.0	.0	-.00
5	16	69	2	.0	.0	.0	-.00
5	16	69	3	.0	.0	.0	-.00
5	16	69	4	.0	.0	.0	-.00
5	16	70	1	.0	.0	.0	-.00
5	16	70	2	.0	.0	.0	-.00
5	16	70	3	.0	.0	.0	-.00
5	16	70	4	.0	.0	.0	-.00
5	16	71	1	.0	.0	.0	-.00
5	16	71	2	.0	.0	.0	-.00
5	16	71	3	.0	.0	.0	-.00
5	16	71	4	.0	.0	.0	-.00
5	16	72	1	.0	.0	.0	-.00
5	16	72	2	.0	.0	.0	-.00
5	16	72	3	.0	.0	.0	-.00
5	16	72	4	.0	.0	.0	-.00
5	16	73	1	.0	.0	.0	-.00
5	16	73	2	.0	.0	.0	-.00
5	16	73	3	.0	.0	.0	-.00
5	16	73	4	.0	.0	.0	-.00
5	16	74	1	.0	.0	.0	-.00
5	16	74	2	.0	.0	.0	-.00

DATA FURNISHED BY THE WASHINGTON OFFICE

REG	FOR	FISCAL YEAR	FISCAL QTR	UNCUT VOLUME UNDER CONTRACT	VOLUME SOLD	VALUE SOLD	VOLUME HARVESTED	VALUE HARVESTED	LOGGING COST	HAULING COST	HAUL DIST	VOLUME SOLD SUBJECT TO PRICE CHANGE: ESCALATION	RATE REDET	RATE REDET PRICE CHANGE: OLD	RATE REDET PRICE CHANGE: NEW	NO OF SALES
5	17	63	1	122100	9494	129047	52880	583235	-.00	-.00	-0	-0	-0	-0	-.00	-0
5	17	63	2	-0	5200	72470	20118	279836	-.00	-.00	-0	-0	-0	-0	-.00	-0
5	17	63	3	-0	1	0	9608	91809	-.00	-.00	-0	-0	-0	-.00	-.00	-0
5	17	63	4	-0	95555	1247939	23554	339144	-.00	-.00	-0	-0	-0	-.00	-.00	-0
5	17	64	1	182300	14762	69006	60468	713067	9.68	10.03	-0	0	0	.00	.00	2
5	17	64	2	-0	1298	14000	16564	183807	-.00	-.00	-0	0	0	.00	.00	0
5	17	64	3	-0	16485	105840	5637	40494	10.00	7.20	16	15080	0	.00	.00	1
5	17	64	4	-0	133595	2339266	16643	314912	10.10	10.49	25	132890	0	.00	.00	18
5	17	65	1	278000	7650	66784	34031	617754	10.15	11.81	33	7650	0	.00	.00	4
5	17	65	2	-0	1	0	20212	225609	-.00	-.00	-0	0	33180	10.10	10.10	0
5	17	65	3	-0	1	0	12659	130713	-.00	-.00	-0	0	0	.00	.00	0
5	17	65	4	-0	133986	2087807	22536	369986	10.18	9.67	28	132840	0	.00	.00	14
5	17	66	1	269200	169	2791	48851	777132	32.00	16.54	-0	0	0	.00	.00	0
5	17	66	2	-0	69	2125	39483	458542	.00	.00	71	0	54560	12.69	14.69	0
5	17	66	3	-0	21000	158460	25199	235501	10.16	5.40	19	21000	0	.00	.00	1
5	17	66	4	-0	105932	1862943	32443	817227	10.25	12.07	28	105700	0	.00	.00	11
5	17	67	1	399400	8566	193095	37767	622997	11.60	6.67	32	4700	0	.00	.00	4
5	17	67	2	-0	6700	172655	32276	271598	9.55	6.57	11	6700	74040	16.51	16.51	2
5	17	67	3	-0	4360	107115	15737	224264	9.45	15.55	44	4360	0	.00	.00	2
5	17	67	4	-0	131550	1759583	22596	405452	9.26	9.54	21	131550	0	.00	.00	10
5	17	68	1	484400	1	0	39589	737361	-.00	-.00	-0	0	0	.00	.00	0
5	17	68	2	-0	14257	179249	30947	447812	11.92	10.33	20	13820	11500	10.97	10.97	4
5	17	68	3	-0	2900	30688	21720	402480	10.49	14.37	36	2900	0	.00	.00	1
5	17	68	4	-0	118557	3844343	36404	837357	9.91	12.28	29	118000	0	.00	.00	12
5	17	69	1	398300	10026	346478	52859	1006749	12.01	7.40	14	9700	0	.00	.00	3
5	17	69	2	-0	7900	408676	60733	1264361	9.72	7.23	13	7900	79400	14.89	23.64	1
5	17	69	3	-0	9380	808010	30530	824651	10.67	12.35	25	9380	0	.00	.00	3
5	17	69	4	-0	70099	3317375	33330	1241881	11.26	12.29	32	69800	0	.00	.00	10
5	17	70	1	447500	9901	318061	36556	1320798	11.10	6.27	9	9295	0	.00	.00	4
5	17	70	2	-0	51166	857932	41829	946699	9.12	15.83	38	50900	0	.00	.00	5
5	17	70	3	-0	47793	782696	28907	691069	11.12	11.87	26	47400	0	.00	.00	5
5	17	70	4	-0	79852	1146437	31573	689363	9.95	13.96	34	77900	0	.00	.00	9
5	17	71	1	415500	36900	564209	41679	863764	12.70	10.94	28	36900	0	.00	.00	4
5	17	71	2	-0	19202	40655	40449	926349	13.88	9.97	26	18500	0	.00	.00	3
5	17	71	3	-0	13000	46888	21472	352712	13.89	13.68	42	13000	0	.00	.00	1
5	17	71	4	-0	22905	912854	24552	789327	10.44	9.24	19	22905	0	.00	.00	3
5	17	72	1	472600	29274	1492235	32366	1237733	12.89	12.35	24	29100	0	.00	.00	2
5	17	72	2	-0	3233	38719	33534	1031235	10.83	10.87	31	0	0	.00	.00	2
5	17	72	3	-0	3100	219667	27577	1031578	13.55	8.46	15	3100	0	.00	.00	2
5	17	72	4	-0	74400	3784079	40559	1563719	12.50	12.03	26	74400	0	.00	.00	6
5	17	73	1	408400	18650	516104	51997	2613428	14.05	11.88	29	17900	0	.00	.00	3
5	17	73	2	-0	18500	949357	32074	768262	16.50	14.02	23	18500	0	.00	.00	2
5	17	73	3	-0	18800	1413670	31901	751458	12.92	13.22	32	18800	11600	48.99	48.99	2
5	17	73	4	-0	66224	5074947	23964	1628719	14.54	15.18	33	66100	0	.00	.00	9
5	17	74	1	394800	18593	921984	38432	2076817	16.43	9.59	26	18338	0	.00	.00	6
5	17	74	2	-0	20347	842617	29758	1051223	36.85	13.01	19	19370	0	.00	.00	6
5	17	74	3	-0	5330	589431	20803	766532	20.27	8.80	29	5330	0	.00	.00	1
5	17	74	4	-0	35532	2191219	35003	2170522	32.42	11.98	23	0	0	.00	.00	8

DATA FURNISHED BY THE REGIONAL OR FOREST OFFICES

REG	FOR	FISCAL YEAR	FISCAL QTR	TOTAL STC 24 CAPACITY	TOTAL STC 26 CAPACITY	TOTAL CAPACITY	MILL SITE INVENTORY
5	17	64	3	.0	.0	.0	-.00
5	17	64	4	.0	.0	.0	-.00
5	17	65	1	.0	.0	.0	-.00
5	17	65	2	.0	.0	.0	-.00
5	17	65	3	.0	.0	.0	-.00
5	17	65	4	.0	.0	.0	-.00
5	17	66	1	.0	.0	.0	-.00
5	17	66	2	.0	.0	.0	-.00
5	17	66	3	.0	.0	.0	-.00
5	17	66	4	.0	.0	.0	-.00
5	17	67	1	.0	.0	.0	-.00
5	17	67	2	.0	.0	.0	-.00
5	17	67	3	.0	.0	.0	-.00
5	17	67	4	.0	.0	.0	-.00
5	17	68	1	.0	.0	.0	-.00
5	17	68	2	.0	.0	.0	-.00
5	17	68	3	.0	.0	.0	-.00
5	17	68	4	.0	.0	.0	-.00
5	17	69	1	.0	.0	.0	-.00
5	17	69	2	.0	.0	.0	-.00
5	17	69	3	.0	.0	.0	-.00
5	17	69	4	.0	.0	.0	-.00
5	17	70	1	.0	.0	.0	-.00
5	17	70	2	.0	.0	.0	-.00
5	17	70	3	.0	.0	.0	-.00
5	17	70	4	.0	.0	.0	-.00
5	17	71	1	.0	.0	.0	-.00
5	17	71	2	.0	.0	.0	-.00
5	17	71	3	.0	.0	.0	-.00
5	17	71	4	.0	.0	.0	-.00
5	17	72	1	.0	.0	.0	-.00
5	17	72	2	.0	.0	.0	-.00
5	17	72	3	.0	.0	.0	-.00
5	17	72	4	.0	.0	.0	-.00
5	17	73	1	.0	.0	.0	-.00
5	17	73	2	.0	.0	.0	-.00
5	17	73	3	.0	.0	.0	-.00
5	17	73	4	.0	.0	.0	-.00
5	17	74	1	.0	.0	.0	-.00
5	17	74	2	.0	.0	.0	-.00

DATA FURNISHED BY THE WASHINGTON OFFICE

REG	FOR	FISCAL YEAR	FISCAL QTR	UNCUT VOLUME UNDER CONTRACT	VOLUME SOLD	VALUE SOLD	VOLUME HARVESTED	VALUE HARVESTED	LOGGING COST	HAULING COST	HAUL DIST	VOLUME SOLD SUBJECT TO RATE REDET: ESCALATION	RATE REDET	RATE REDET PRICE CHANGE: OLD	NEW	NO OF SALES
6	3	63	1	1029400	24090	346786	148296	2372447	-.00	-.00	-0	-0	-0	-.00	-.00	-0
6	3	63	2	-0	54990	1318396	123047	2298522	-.00	-.00	-0	-0	-0	-.00	-.00	-0
6	3	63	3	-0	25600	548554	60210	1594227	-.00	-.00	-0	-0	-0	-.00	-.00	-0
6	3	63	4	-0	349400	5424782	105269	2286455	-.00	-.00	-0	-0	-0	-.00	-.00	-0
6	3	64	1	913100	60800	1026613	165973	2866570	12.69	12.85	-0	0	0	.00	.00	23
6	3	64	2	-0	106210	2841669	103051	1912151	12.59	10.47	-0	0	0	.00	.00	31
6	3	64	3	-0	29300	496417	59606	1544199	11.74	9.86	21	28970	0	.00	.00	12
6	3	64	4	-0	172370	4037670	119213	2676965	12.37	10.12	29	167930	211100	22.19	17.02	42
6	3	65	1	1097500	18540	589770	157755	2438398	12.89	7.82	19	3500	825	22.33	23.05	21
6	3	65	2	-0	113151	2805565	111658	2019156	12.71	9.60	21	101667	11800	10.94	15.48	34
6	3	65	3	-0	46341	1400404	36188	1079397	13.41	10.69	26	41300	0	.00	.00	10
6	3	65	4	-0	219730	7241380	131492	3065312	12.81	10.03	30	201880	253640	19.49	24.37	50
6	3	66	1	1181300	36040	1369749	191059	3403711	13.36	10.95	34	27500	52450	11.68	7.60	25
6	3	66	2	-0	60130	1989196	141594	2694850	12.41	9.48	22	52400	10200	8.24	11.31	14
6	3	66	3	-0	106750	4244351	23554	785144	12.25	10.20	32	100540	7200	18.78	21.93	26
6	3	66	4	-0	182145	6233179	147077	3976109	11.44	10.46	27	172770	391150	19.98	20.40	48
6	3	67	1	807300	87605	3087664	175421	4004610	11.93	8.53	22	85035	0	.00	.00	36
6	3	67	2	-0	71220	2827997	147206	3459332	11.54	9.90	31	69350	18200	17.62	21.29	22
6	3	67	3	-0	111710	3689208	61413	2218894	12.81	11.04	30	110870	27000	19.11	20.21	29
6	3	67	4	-0	121290	3735686	161395	5444117	12.41	11.87	26	112230	495270	18.98	19.36	33
6	3	68	1	1003400	109550	3966365	136049	2904655	11.85	10.57	32	0	0	.00	.00	36
6	3	68	2	-0	99416	4316603	145185	3790591	12.91	10.68	29	0	0	.00	.00	24
6	3	68	3	-0	85100	4067518	93225	3608560	12.74	10.85	32	0	0	.00	.00	12
6	3	68	4	-0	105445	4639455	181663	6658057	12.11	9.93	26	0	251380	28.03	35.66	22
6	3	69	1	944200	73370	4203054	191396	6474318	12.21	9.03	24	0	202800	16.86	23.33	40
6	3	69	2	-0	140210	9416165	159209	5644292	12.34	11.44	32	0	0	.00	.00	26
6	3	69	3	-0	70830	7332232	28173	1616388	11.11	9.86	27	0	0	.00	.00	16
6	3	69	4	-0	68829	4307870	117806	6873792	11.32	12.23	30	0	309810	35.19	73.18	27
6	3	70	1	1010300	77054	4079370	201713	9267662	12.03	10.96	33	0	28400	18.51	62.42	19
6	3	70	2	-0	97498	5477657	152132	5974997	11.50	9.47	26	0	0	.00	.00	32
6	3	70	3	-0	159495	7949006	68062	3328887	12.61	12.72	37	0	0	.00	.00	36
6	3	70	4	-0	121790	3821446	145534	5960708	14.33	10.35	30	0	170800	62.04	63.26	40
6	3	71	1	1141800	78139	4216387	183458	5513221	11.24	11.18	34	3700	35700	37.42	37.42	20
6	3	71	2	-0	130478	4379545	174079	3103462	15.90	10.98	35	0	0	.00	.00	22
6	3	71	3	-0	38931	1031042	22175	1203592	13.40	8.16	20	0	0	.00	.00	13
6	3	71	4	-0	197867	6069207	97797	4759415	14.53	12.91	34	0	117500	56.24	56.24	47
6	3	72	1	1182200	21102	1015116	149395	5323426	15.46	11.37	29	0	18000	38.45	47.49	9
6	3	72	2	-0	122358	6193121	100476	4061546	14.77	10.77	33	0	11000	54.76	54.76	39
6	3	72	3	-0	60692	3135647	24937	1401027	14.49	11.18	31	0	0	.00	.00	19
6	3	72	4	-0	168743	8870952	112960	6357083	15.44	11.63	35	0	60200	64.06	64.06	32
6	3	73	1	1035100	41825	2794454	159017	8332214	16.05	10.65	30	0	84400	40.76	65.06	22
6	3	73	2	-0	143920	16111693	135698	8189136	16.36	14.54	36	0	0	.00	.00	28
6	3	73	3	-0	69330	11171292	71933	5012811	15.92	12.00	29	0	0	.00	.00	26
6	3	73	4	-0	108679	14190735	163969	10093266	15.53	14.38	33	0	50400	62.49	62.49	25
6	3	74	1	916100	76180	10927030	107237	9200493	16.30	14.68	31	0	0	.00	.00	26
6	3	74	2	-0	125817	16125152	127625	8149053	16.00	15.83	36	0	0	.00	.00	36
6	3	74	3	-0	63570	8228576	44388	3546426	31.11	13.85	25	11700	0	.00	.00	19
6	3	74	4	-0	165575	29156991	103016	8714459	17.69	16.01	32	0	0	.00	.00	44

DATA FURNISHED BY THE REGIONAL OR FOREST OFFICES

REG	FOR	FISCAL YEAR	FISCAL QTR	TOTAL STC 24 CAPACITY	TOTAL STC 26 CAPACITY	TOTAL CAPACITY	MILL SITE INVENTORY
6	3	64	3	271.5	142.3	413.8	-.00
6	3	64	4	271.5	142.3	413.8	-.00
6	3	65	1	271.5	142.3	413.8	-.00
6	3	65	2	271.5	142.3	413.8	-.00
6	3	65	3	271.5	142.3	413.8	-.00
6	3	65	4	271.8	142.3	414.1	-.00
6	3	66	1	271.8	142.3	414.1	-.00
6	3	66	2	271.8	142.3	414.1	-.00
6	3	66	3	276.8	142.3	419.1	-.00
6	3	66	4	276.8	142.3	419.1	-.00
6	3	67	1	276.8	142.3	419.1	-.00
6	3	67	2	279.3	142.3	421.6	-.00
6	3	67	3	279.3	142.3	421.6	-.00
6	3	67	4	279.3	142.3	421.6	-.00
6	3	68	1	279.3	142.3	421.6	-.00
6	3	68	2	279.3	142.3	421.6	-.00
6	3	68	3	287.3	142.3	429.6	-.00
6	3	68	4	287.3	142.3	429.6	-.00
6	3	69	1	287.3	142.3	429.6	-.00
6	3	69	2	287.3	142.3	429.6	-.00
6	3	69	3	287.3	142.3	429.6	-.00
6	3	69	4	287.3	142.3	429.6	-.00
6	3	70	1	287.3	142.3	429.6	-.00
6	3	70	2	287.3	142.3	429.6	-.00
6	3	70	3	288.3	142.3	430.6	-.00
6	3	70	4	288.3	142.3	430.6	-.00
6	3	71	1	288.3	142.3	430.6	-.00
6	3	71	2	282.3	142.3	424.6	-.00
6	3	71	3	282.3	142.3	424.6	-.00
6	3	71	4	282.3	142.3	424.6	-.00
6	3	72	1	282.3	142.3	424.6	-.00
6	3	72	2	222.3	142.3	364.6	-.00
6	3	72	3	282.3	142.3	424.6	-.00
6	3	72	4	282.3	142.3	424.6	-.00
6	3	73	1	288.3	142.3	430.6	-.00
6	3	73	2	288.3	142.3	430.6	-.00
6	3	73	3	288.3	142.3	430.6	-.00
6	3	73	4	288.3	142.3	430.6	-.00
6	3	74	1	310.1	142.3	452.4	-.00
6	3	74	2	310.1	142.3	452.4	-.00

DATA FURNISHED BY THE WASHINGTON OFFICE

REG	FOR	FISCAL YEAR	QTR	UNCUT VOLUME UNDER CONTRACT	VOLUME SOLD	VALUE SOLD	VOLUME HARVESTED	VALUE HARVESTED	LOGGING COST	HAULING COST	HAUL DIST	VOLUME SOLD SUBJECT TO RATE REDET: ESCALATION	RATE REDET	RATE REDET PRICE CHANGE: OLD	NEW	NO OF SALES
6	5	63	1	478000	65270	170766	82111	940817	-.00	-.00	-0	-0	-0	-.00	-.00	-0
6	5	63	2	-0	24654	343571	41062	706189	-.00	-.00	-0	-0	-0	-.00	-.00	-0
6	5	63	3	-0	16310	443005	26028	549078	-.00	-.00	-0	-0	-0	-.00	-.00	-0
6	5	63	4	-0	95595	1274084	51698	773953	-.00	-.00	-0	-0	-0	-.00	-.00	-0
6	5	64	1	452900	69280	716824	86733	1145697	12.10	10.98	-0	0	0	.00	.00	29
6	5	64	2	-0	26377	289714	37286	565376	12.58	13.40	-0	0	0	.00	.00	13
6	5	64	3	-0	7605	73270	31597	641455	15.16	11.37	26	7200	0	.00	.00	5
6	5	64	4	-0	70305	1611887	53221	982151	12.42	9.00	24	69120	65090	14.18	14.86	39
6	5	65	1	433000	87385	1916877	97244	1025579	12.28	10.91	34	82860	0	.00	.00	45
6	5	65	2	-0	44770	764171	51579	470437	13.66	12.59	41	44610	0	.00	.00	16
6	5	65	3	-0	1000	44813	28562	566444	13.77	6.99	10	0	200	19.36	21.02	1
6	5	65	4	-0	52250	1512134	63636	997944	12.97	8.76	25	42920	114230	10.40	10.96	22
6	5	66	1	429500	71590	1977297	104614	936977	13.24	9.98	30	64820	0	.00	.00	25
6	5	66	2	-0	16480	504434	73056	835988	12.23	10.89	40	14940	0	.00	.00	10
6	5	66	3	-0	3175	111710	17696	575968	10.79	8.53	24	3000	0	.00	.00	4
6	5	66	4	-0	81430	2040504	72269	1642311	12.07	9.67	31	79050	181430	12.25	13.44	15
6	5	67	1	284600	74028	1496955	71388	1103449	12.12	10.11	27	70873	30400	21.36	8.18	23
6	5	67	2	-0	19410	306246	46487	804312	13.00	10.21	33	15410	0	.00	.00	10
6	5	67	3	-0	1470	47673	13086	499887	15.11	7.54	26	0	0	.00	.00	3
6	5	67	4	-0	21490	536015	52782	1005543	13.04	8.81	28	9880	250230	16.51	16.72	16
6	5	68	1	345000	24470	389296	70694	1182356	13.74	10.08	27	0	0	.00	.00	12
6	5	68	2	-0	39133	1233772	54052	967497	13.79	8.96	24	0	0	.00	.00	8
6	5	68	3	-0	11045	356513	23751	706601	14.59	9.59	24	0	2000	19.20	33.24	6
6	5	68	4	-0	64800	2670033	48761	133995	12.71	11.21	30	0	215730	18.49	26.96	26
6	5	69	1	308000	7630	336767	86468	2312841	13.05	9.19	26	0	0	.00	.00	12
6	5	69	2	-0	62939	1685560	42592	1334603	13.35	11.40	33	0	0	.00	.00	28
6	5	69	3	-0	420	24413	7317	219875	11.44	5.09	5	0	0	.00	.00	1
6	5	69	4	-0	45051	2016718	42728	1453169	12.44	12.08	31	0	162600	46.34	61.16	16
6	5	70	1	305800	11423	410625	55141	1690019	14.33	11.66	26	0	5000	56.83	79.66	9
6	5	70	2	-0	77823	1770837	41840	1459354	12.94	11.54	30	0	0	.00	.00	28
6	5	70	3	-0	27445	525164	22743	805996	12.92	9.99	25	0	8100	49.18	49.18	8
6	5	70	4	-0	26820	534775	59430	1606544	14.74	11.88	22	0	191700	49.29	49.52	7
6	5	71	1	313300	31534	625688	53516	1054598	14.80	9.77	23	0	0	.00	.00	10
6	5	71	2	-0	32833	925255	28518	574290	14.87	10.21	31	0	0	.00	.00	14
6	5	71	3	-0	6010	196727	3211	73745	14.59	9.56	17	0	0	.00	.00	3
6	5	71	4	-0	42904	585612	35793	927653	15.67	10.48	23	0	126800	45.47	45.47	14
6	5	72	1	302900	46045	375277	53330	1067636	16.19	11.37	24	0	0	.00	.00	8
6	5	72	2	-0	5663	198902	28616	632140	15.12	12.19	32	0	0	.00	.00	5
6	5	72	3	-0	10395	256193	6590	172668	15.10	9.49	18	0	0	.00	.00	8
6	5	72	4	-0	30525	1094136	44532	1013774	17.42	9.66	25	0	58900	58.10	58.10	22
6	5	73	1	243400	27040	1019233	70525	2297202	17.12	10.46	19	0	27200	29.73	58.77	15
6	5	73	2	-0	65740	4966476	49194	1723693	35.08	15.67	29	0	0	.00	.00	23
6	5	73	3	-0	10100	1069019	33523	1400901	24.59	14.22	17	0	0	.00	.00	3
6	5	73	4	-0	52315	3840553	47966	1956363	18.24	14.90	36	0	23300	72.42	72.42	18
6	5	74	1	268400	55080	5717379	60865	2390232	20.74	14.28	21	0	10700	75.40	75.40	9
6	5	74	2	-0	15805	1602589	32951	1633677	21.14	15.66	32	0	0	.00	.00	7
6	5	74	3	-0	11181	1171178	9001	553696	19.19	15.62	44	0	0	.00	.00	11
6	5	74	4	-0	68932	7007734	32206	2283285	25.71	17.22	38	0	0	.00	.00	21

DATA FURNISHED BY THE REGIONAL OR FOREST OFFICES

REG	FOR	FISCAL YEAR	FISCAL QTR	TOTAL STC 24 CAPACITY	TOTAL STC 26 CAPACITY	TOTAL CAPACITY	MILL SITE INVENTORY
6	5	64	3	273.6	13.0	286.6	-.00
6	5	64	4	273.6	13.0	286.6	-.00
6	5	65	1	273.6	13.0	286.6	-.00
6	5	65	2	273.6	13.0	286.6	-.00
6	5	65	3	273.6	13.0	286.6	-.00
6	5	65	4	273.6	13.0	286.6	-.00
6	5	66	1	273.6	13.0	286.6	-.00
6	5	66	2	273.6	13.0	286.6	-.00
6	5	66	3	273.6	13.0	286.6	-.00
6	5	66	4	273.6	13.0	286.6	-.00
6	5	67	1	273.6	13.0	286.6	-.00
6	5	67	2	273.6	13.0	286.6	-.00
6	5	67	3	273.6	13.0	286.6	-.00
6	5	67	4	273.6	13.0	286.6	-.00
6	5	68	1	273.6	13.0	286.6	-.00
6	5	68	2	273.6	13.0	286.6	-.00
6	5	68	3	273.6	13.0	286.6	-.00
6	5	68	4	273.6	13.0	286.6	-.00
6	5	69	1	273.6	13.0	286.6	-.00
6	5	69	2	273.6	13.0	286.6	-.00
6	5	69	3	273.6	13.0	286.6	-.00
6	5	69	4	273.6	13.0	286.6	-.00
6	5	70	1	273.6	13.0	286.6	-.00
6	5	70	2	273.6	13.0	286.6	-.00
6	5	70	3	273.6	13.0	286.6	-.00
6	5	70	4	273.6	13.0	286.6	-.00
6	5	71	1	273.6	13.0	286.6	-.00
6	5	71	2	273.6	13.0	286.6	-.00
6	5	71	3	273.6	13.0	286.6	-.00
6	5	71	4	273.6	13.0	286.6	-.00
6	5	72	1	273.6	13.0	286.6	-.00
6	5	72	2	273.6	13.0	286.6	-.00
6	5	72	3	273.6	13.0	286.6	-.00
6	5	72	4	273.6	13.0	286.6	-.00
6	5	73	1	273.6	13.0	286.6	-.00
6	5	73	2	273.6	13.0	286.6	-.00
6	5	73	3	273.6	13.0	286.6	-.00
6	5	73	4	273.6	13.0	286.6	-.00
6	5	74	1	273.6	13.0	286.6	-.00
6	5	74	2	273.6	13.0	286.6	-.00

DATA FURNISHED BY THE WASHINGTON OFFICE

REG	FOR	FISCAL YEAR	FISCAL QTR	UNCUT VOLUME UNDER CONTRACT	VOLUME SOLD	VALUE SOLD	VOLUME HARVESTED	VALUE HARVESTED	LOGGING COST	HAULING COST	HAUL DIST	VOLUME SOLD SUBJECT TO PRICE CHANGE: ESCALATION RATE REDET	RATE REDET	RATE REDET PRICE CHANGE: OLD	NEW	NO OF SALES
6	6	63	1	621600	11323	197641	114897	2395059	-.00	-.00	-0	-0	-0	-.00	-.00	-0
6	6	63	2	-0	72040	2213651	93384	1984940	-.00	-.00	-0	-0	-0	-.00	-.00	-0
6	6	63	3	-0	106160	2501813	26520	729876	-.00	-.00	-0	-0	-0	-.00	-.00	-0
6	6	63	4	-0	230995	5650431	97600	2470626	-.00	-.00	-0	-0	-0	-.00	-.00	-0
6	6	64	1	572500	15330	315881	140231	3177792	12.55	14.87	-0	0	0	.00	.00	10
6	6	64	2	-0	72635	1811375	78728	2160229	11.76	13.77	-0	0	0	.00	.00	27
6	6	64	3	-0	15825	372138	33360	1070582	9.23	8.66	31	9575	0	.00	.00	4
6	6	64	4	-0	226685	6283147	92279	2617543	11.53	12.39	45	214770	127525	24.92	24.95	50
6	6	65	1	818500	650	22313	135798	3073135	12.17	12.48	47	0	0	.00	.00	5
6	6	65	2	-0	48990	1980604	80907	1752213	12.91	11.34	44	47940	0	.00	.00	18
6	6	65	3	-0	37100	1108809	13573	398340	12.26	13.15	52	32800	0	.00	.00	7
6	6	65	4	-0	299361	10679947	102752	2680098	12.11	11.95	44	280000	155840	26.42	26.65	68
6	6	66	1	712400	12946	482137	163571	4010815	13.12	13.54	53	9820	44830	19.92	16.04	14
6	6	66	2	-0	19770	859552	117647	3498335	12.46	13.73	50	16200	8500	12.68	15.22	10
6	6	66	3	-0	2571	155345	16378	867084	14.85	13.19	51	0	0	.00	.00	6
6	6	66	4	-0	246667	10937745	126689	4819084	11.62	11.96	46	223150	170860	26.47	26.60	62
6	6	67	1	477300	13034	618612	128602	4041727	11.39	13.72	41	22500	0	.00	.00	14
6	6	67	2	-0	22620	871088	96565	3059829	12.36	12.40	50	1400	0	.00	.00	9
6	6	67	3	-0	56520	2300611	19840	791426	12.34	14.41	56	50020	0	.00	.00	23
6	6	67	4	-0	264560	9144848	119137	3724019	11.63	11.42	40	187150	229940	29.74	29.79	50
6	6	68	1	796000	19381	891002	95796	3074930	11.22	11.44	44	5030	0	.00	.00	15
6	6	68	2	-0	21190	703877	99770	3717555	20.03	13.09	48	0	0	.00	.00	15
6	6	68	3	-0	115490	5795471	60514	2396276	14.50	11.20	39	0	0	.00	.00	37
6	6	68	4	-0	182005	7715756	97060	3970189	12.69	10.34	37	58510	124020	28.58	33.14	46
6	6	69	1	807600	19245	1351105	123196	4647218	12.08	12.36	50	0	0	.00	.00	11
6	6	69	2	-0	51175	3779924	96801	4515154	12.87	10.76	41	7700	0	.00	.00	18
6	6	69	3	-0	25930	2637658	17894	940318	14.53	9.46	33	5500	0	.00	.00	10
6	6	69	4	-0	241026	15196684	106896	6214826	13.19	12.54	42	55100	161950	35.56	76.26	58
6	6	70	1	826000	31111	1187924	173579	8177716	14.51	10.13	39	12650	21650	55.03	67.27	22
6	6	70	2	-0	121983	5479322	113715	4781324	13.78	10.67	38	12730	11900	60.66	60.66	49
6	6	70	3	-0	57746	2261940	32792	1689088	13.23	11.91	44	9840	0	.00	.00	21
6	6	70	4	-0	164875	5588848	92108	3783046	14.85	10.68	37	50930	74250	60.37	67.53	52
6	6	71	1	963000	48389	2342523	124183	4895389	13.66	12.48	51	1400	0	.00	.00	18
6	6	71	2	-0	126720	2801659	71052	2848710	14.11	11.15	42	35720	2650	88.02	88.02	32
6	6	71	3	-0	26740	1312291	16094	667556	17.32	14.24	49	0	0	.00	.00	14
6	6	71	4	-0	207550	5171130	76668	3600892	14.37	12.36	44	47900	53200	36.35	36.35	50
6	6	72	1	1025700	39725	2379607	122994	5321988	18.05	14.30	50	5600	0	.00	.00	26
6	6	72	2	-0	40780	1305388	98465	4259217	23.68	15.49	52	8540	8200	21.26	23.36	23
6	6	72	3	-0	59795	2154069	28679	1573507	15.79	12.49	40	29040	0	.00	.00	21
6	6	72	4	-0	251231	9188583	104961	4645807	17.62	13.52	45	56200	56700	61.20	62.71	77
6	6	73	1	926700	51097	3067679	161036	7244596	17.93	15.40	43	7100	0	.00	.00	24
6	6	73	2	-0	112965	7795873	115253	6263505	25.10	15.30	46	11700	5050	21.47	47.60	52
6	6	73	3	-0	24954	1554360	67865	3685112	24.60	19.17	52	3000	0	.00	.00	20
6	6	73	4	-0	165631	16501735	121352	7213271	24.81	17.13	50	8100	23100	60.55	78.86	51
6	6	74	1	895300	117602	11652560	141971	8205481	28.33	13.63	36	23900	6700	41.66	76.92	23
6	6	74	2	-0	126365	17395723	72682	4900455	21.76	17.54	48	2370	0	.00	.00	30
6	6	74	3	-0	75245	8970105	35501	3069072	18.87	13.36	35	43650	0	.00	.00	12
6	6	74	4	-0	56400	9405280	95265	8279446	14.71	6.76	30	0	1500	8.53	83.53	14

DATA FURNISHED BY THE REGIONAL OR FOREST OFFICES

REG	FOR	FISCAL YEAR	FISCAL QTR	TOTAL STC 24 CAPACITY	TOTAL STC 26 CAPACITY	TOTAL CAPACITY	MILL SITE INVENTORY
6	6	64	3	296.1	.0	296.1	-.00
6	6	64	4	296.1	.0	296.1	-.00
6	6	65	1	296.1	.0	296.1	-.00
6	6	65	2	296.1	.0	296.1	-.00
6	6	65	3	297.0	.0	297.0	-.00
6	6	65	4	297.0	.0	297.0	-.00
6	6	66	1	297.0	.0	297.0	-.00
6	6	66	2	297.0	.0	297.0	-.00
6	6	66	3	307.5	.0	307.5	-.00
6	6	66	4	307.5	.0	307.5	-.00
6	6	67	1	307.5	.0	307.5	-.00
6	6	67	2	307.5	.0	307.5	-.00
6	6	67	3	289.3	.0	289.3	-.00
6	6	67	4	289.3	.0	289.3	-.00
6	6	68	1	289.3	.0	289.3	-.00
6	6	68	2	289.3	.0	289.3	-.00
6	6	68	3	293.6	.0	293.6	-.00
6	6	68	4	293.6	.0	293.6	-.00
6	6	69	1	293.6	.0	293.6	-.00
6	6	69	2	293.6	.0	293.6	-.00
6	6	69	3	322.1	.0	322.1	-.00
6	6	69	4	322.1	.0	322.1	-.00
6	6	70	1	322.1	.0	322.1	-.00
6	6	70	2	322.1	.0	322.1	-.00
6	6	70	3	315.2	.0	315.2	-.00
6	6	70	4	315.2	.0	315.2	-.00
6	6	71	1	315.2	.0	315.2	-.00
6	6	71	2	315.2	.0	315.2	-.00
6	6	71	3	337.7	.0	337.7	-.00
6	6	71	4	337.7	.0	337.7	-.00
6	6	72	1	337.7	.0	337.7	-.00
6	6	72	2	337.7	.0	337.7	-.00
6	6	72	3	351.9	.0	351.9	-.00
6	6	72	4	352.9	.0	352.9	-.00
6	6	73	1	352.9	.0	352.9	-.00
6	6	73	2	352.9	.0	352.9	-.00
6	6	73	3	344.8	.0	344.8	-.00
6	6	73	4	344.8	.0	344.8	-.00
6	6	74	1	344.8	.0	344.8	-.00
6	6	74	2	344.8	.0	344.8	-.00

DATA FURNISHED BY THE WASHINGTON OFFICE

REG	FOR	FISCAL YEAR	FISCAL QTR	UNCUT VOLUME UNDER CONTRACT	VOLUME SOLD	VALUE SOLD	VOLUME HARVESTED	VALUE HARVESTED	LOGGING COST	HAULING COST	HAUL DIST	VOLUME SOLD SUBJECT TO PRICE REDET: ESCALATION	RATE REDET	RATE REDET PRICE CHANGE: OLD	NEW	NO OF SALES
6	15	63	1	858900	70410	1231986	123178	2362089	-.00	-.00	-0	-0	-0	-.00	-.00	-0
6	15	63	2	-0	177927	3615342	106366	1934363	-.00	-.00	-0	-0	-0	-.00	-.00	-0
6	15	63	3	-0	26550	962936	78637	1270116	-.00	-.00	-0	-0	-0	-.00	-.00	-0
6	15	63	4	-0	137730	2782696	93164	1825723	-.00	-.00	-0	-0	-0	-.00	-.00	-0
6	15	64	1	799200	57955	1094733	144946	2830719	12.04	13.58	-0	0	0	.00	.00	22
6	15	64	2	-0	148670	3585135	74753	1546629	10.59	12.97	-0	0	0	.00	.00	17
6	15	64	3	-0	5840	148076	55636	1049019	13.98	11.27	40	5840	1450	27.38	27.38	6
6	15	64	4	-0	147375	4126823	121811	2241128	11.11	12.28	49	147265	144395	13.23	13.62	35
6	15	65	1	750800	71535	2191274	142108	2566198	11.27	13.28	54	70500	0	.00	.00	17
6	15	65	2	-0	121935	4177779	87696	1672039	12.16	12.43	49	120965	0	.00	.00	28
6	15	65	3	-0	6320	206901	62485	1150434	13.74	10.97	45	6320	12660	22.13	24.07	4
6	15	65	4	-0	151040	5885419	146385	3262984	11.87	12.28	51	149940	107530	9.31	10.18	39
6	15	66	1	677300	79940	2519350	161270	3866663	11.93	12.90	53	78630	0	.00	.00	21
6	15	66	2	-0	119285	3859267	124420	2982749	11.92	13.52	55	118375	0	.00	.00	27
6	15	66	3	-0	88210	358666	49194	1346379	12.15	12.29	52	8640	5840	40.24	40.24	5
6	15	66	4	-0	165990	6573160	164082	4820634	11.29	12.46	49	165990	95470	27.37	28.89	37
6	15	67	1	467900	49976	1914359	98660	2689713	11.29	14.50	61	49770	0	.00	.00	12
6	15	67	2	-0	100561	3393926	83463	2372695	12.28	12.09	45	100310	0	.00	.00	36
6	15	67	3	-0	27540	875365	51142	1617432	13.53	11.30	39	27540	1480	33.45	33.45	13
6	15	67	4	-0	204240	5515933	86366	2588086	12.25	12.44	48	76580	177715	15.85	15.83	57
6	15	68	1	686900	64130	1436569	110735	3140961	12.78	13.94	59	0	0	.00	.00	19
6	15	68	2	-0	108030	2638816	119503	3697587	11.86	12.11	41	0	0	.00	.00	29
6	15	68	3	-0	54370	1474705	79709	2811492	12.64	13.93	48	0	3660	29.92	36.86	13
6	15	68	4	-0	153357	5728748	144767	4942339	11.99	14.43	49	0	202810	16.36	23.33	22
6	15	69	1	703400	48960	1837392	136879	4564532	11.25	14.09	53	0	480	40.70	49.00	10
6	15	69	2	-0	123300	9675284	96769	3142297	11.88	13.94	49	0	1200	38.74	70.71	25
6	15	69	3	-0	39350	4883135	40787	1496696	11.79	12.91	47	0	0	.00	.00	7
6	15	69	4	-0	131250	11271390	105344	4850499	11.95	13.30	46	0	57600	28.83	88.24	27
6	15	70	1	779700	54963	3192557	165333	5962239	11.69	14.16	50	0	3400	36.31	120.26	14
6	15	70	2	-0	162421	8035385	103865	3971049	12.58	12.36	40	0	1200	70.71	70.71	38
6	15	70	3	-0	116932	6654402	52882	1871711	12.45	12.50	44	0	0	.00	.00	29
6	15	70	4	-0	109880	2929915	98489	3202820	16.65	13.58	47	0	31800	64.74	64.74	27
6	15	71	1	947600	59309	1954266	121609	4186965	15.71	13.79	58	0	0	.00	.00	19
6	15	71	2	-0	195894	5897977	73667	2357789	13.89	13.90	47	0	0	.00	.00	30
6	15	71	3	-0	78190	1594454	45447	1429984	16.65	14.52	55	0	0	.00	.00	14
6	15	71	4	-0	106326	2781728	103536	4433139	18.12	13.78	51	0	0	.00	.00	21
6	15	72	1	959300	31860	1177454	132035	5231536	14.09	14.16	56	0	0	.00	.00	6
6	15	72	2	-0	210583	8045179	85847	3470999	16.70	14.20	52	0	0	.00	.00	37
6	15	72	3	-0	97099	4213833	64068	2960023	20.99	13.96	48	0	0	.00	.00	29
6	15	72	4	-0	17337	686405	17656	829467	20.61	13.92	41	0	0	.00	.00	17
6	15	73	1	859700	67885	3220218	164404	7995236	19.85	13.25	50	0	0	.00	.00	20
6	15	73	2	-0	150722	8309873	116620	6434681	23.60	13.47	46	0	0	.00	.00	35
6	15	73	3	-0	61295	3199435	82520	3613633	25.03	16.75	57	0	0	.00	.00	12
6	15	73	4	-0	52090	4959274	123928	5086950	21.54	15.65	58	0	0	.00	.00	8
6	15	74	1	788300	123725	14066372	136032	4305918	21.40	16.55	52	0	0	.00	.00	21
6	15	74	2	-0	127090	12487666	75040	3291777	26.05	14.79	46	20350	0	.00	.00	22
6	15	74	3	-0	85565	15477405	59752	3659192	18.06	16.70	49	0	0	.00	.00	10
6	15	74	4	-0	52450	8794573	107688	6789588	23.08	16.12	45	0	0	.00	.00	12

DATA FURNISHED BY THE REGIONAL OR FOREST OFFICES

REG	FOR	FISCAL YEAR	QTR	TOTAL STC 24 CAPACITY	TOTAL STC 26 CAPACITY	TOTAL CAPACITY	MILL SITE INVENTORY
6	15	64	3	237.9	.0	237.9	-.00
6	15	64	4	237.9	.0	237.9	-.00
6	15	65	1	237.9	.0	237.9	-.00
6	15	65	2	237.9	.0	237.9	-.00
6	15	65	3	246.9	.0	246.9	-.00
6	15	65	4	246.9	.0	246.9	-.00
6	15	66	1	246.9	.0	246.9	-.00
6	15	66	2	246.9	.0	246.9	-.00
6	15	66	3	246.9	.0	246.9	-.00
6	15	66	4	246.9	.0	246.9	-.00
6	15	67	1	246.9	.0	246.9	-.00
6	15	67	2	246.9	.0	246.9	-.00
6	15	67	3	246.9	.0	246.9	-.00
6	15	67	4	246.9	.0	246.9	-.00
6	15	68	1	246.9	.0	246.9	-.00
6	15	68	2	246.9	.0	246.9	-.00
6	15	68	3	246.9	.0	246.9	-.00
6	15	68	4	246.9	.0	246.9	-.00
6	15	69	1	250.9	.0	250.9	-.00
6	15	69	2	250.9	.0	250.9	-.00
6	15	69	3	252.9	.0	252.9	-.00
6	15	69	4	252.9	.0	252.9	-.00
6	15	70	1	252.9	.0	252.9	-.00
6	15	70	2	252.9	.0	252.9	-.00
6	15	70	3	276.8	.0	276.8	-.00
6	15	70	4	276.8	.0	276.8	-.00
6	15	71	1	276.8	.0	276.8	-.00
6	15	71	2	276.8	.0	276.8	-.00
6	15	71	3	321.7	.0	321.7	-.00
6	15	71	4	321.7	.0	321.7	-.00
6	15	72	1	321.7	.0	321.7	-.00
6	15	72	2	321.7	.0	321.7	-.00
6	15	72	3	326.7	.0	326.7	-.00
6	15	72	4	326.7	.0	326.7	-.00
6	15	73	1	326.7	.0	326.7	-.00
6	15	73	2	326.7	.0	326.7	-.00
6	15	73	3	356.5	.0	356.5	-.00
6	15	73	4	369.0	.0	369.0	-.00
6	15	74	1	369.0	.0	369.0	-.00
6	15	74	2	369.0	.0	369.0	-.00

DATA FURNISHED BY THE WASHINGTON OFFICE

REG	FOR	FISCAL YEAR	FISCAL QTR	UNCUT VOLUME UNDER CONTRACT	VOLUME SOLD	VALUE SOLD	VOLUME HARVESTED	VALUE HARVESTED	LOGGING COST	HAULING COST	HAUL DIST	VOLUME SOLD SUBJECT TO RATE REDET: ESCALATION	VOLUME SOLD SUBJECT TO RATE REDET: RATE REDET	PRICE CHANGE: OLD	PRICE CHANGE: NEW	NO OF SALES
8	6	63	1	63600	3338	75099	12594	247427	-.00	-.00	-0	-0	-0	-.00	-.00	-0
8	6	63	2	-0	14439	270489	24345	495078	-.00	-.00	-0	-0	-0	-.00	-.00	-0
8	6	63	3	-0	14299	275731	8705	170960	-.00	-.00	-0	-0	-0	-.00	-.00	-0
8	6	63	4	-0	26597	415986	12636	233486	-.00	-.00	-0	-0	-0	-.00	-.00	-0
8	6	64	1	48300	3215	34027	16390	354135	-.00	-.00	-0	0	0	.00	.00	4
8	6	64	2	-0	20999	348524	12204	235500	11.60	13.27	-0	0	0	.00	.00	10
8	6	64	3	-0	5953	93811	10099	190092	9.84	8.80	32	0	0	.00	.00	9
8	6	64	4	-0	21795	370091	17287	350207	12.47	10.30	23	0	0	.00	.00	18
8	6	65	1	74400	7394	113279	11451	233569	10.90	9.22	23	0	0	.00	.00	6
8	6	65	2	-0	6158	147156	16006	306843	12.69	10.59	23	0	0	.00	.00	5
8	6	65	3	-0	19899	359765	14609	246015	11.72	9.12	13	0	0	.00	.00	6
8	6	65	4	-0	23765	589415	16511	267882	12.64	9.69	22	0	0	.00	.00	10
8	6	66	1	96250	2774	18006	9608	202105	9.60	7.88	23	0	0	.00	.00	3
8	6	66	2	-0	12422	279142	15795	284339	11.95	9.49	32	0	0	.00	.00	9
8	6	66	3	-0	15895	331322	9210	176881	10.91	8.55	29	0	0	.00	.00	7
8	6	66	4	-0	38679	1179472	11541	226246	11.44	9.14	26	0	0	.00	.00	18
8	6	67	1	107900	4425	57437	17451	368879	9.84	8.27	23	0	0	.00	.00	4
8	6	67	2	-0	19760	549140	17299	395468	12.34	9.06	20	0	0	.00	.00	11
8	6	67	3	-0	21824	516586	8851	202254	12.50	9.09	25	0	0	.00	.00	11
8	6	67	4	-0	38985	1221633	23321	672504	12.95	9.27	24	0	0	.00	.00	22
8	6	68	1	116350	12110	296950	14833	398938	10.44	8.85	14	0	0	.00	.00	4
8	6	68	2	-0	16638	614655	22088	550571	13.49	9.39	25	0	0	.00	.00	7
8	6	68	3	-0	11652	283129	12386	362222	11.69	9.80	27	0	0	.00	.00	7
8	6	68	4	-0	40313	1418852	26433	800140	12.06	9.04	23	0	0	.00	.00	18
8	6	69	1	120200	5146	205531	13358	512859	12.35	8.62	12	0	0	.00	.00	4
8	6	69	2	-0	7594	322647	23965	755742	11.82	9.79	16	0	0	.00	.00	5
8	6	69	3	-0	15632	742850	4516	92065	12.66	8.46	20	0	0	.00	.00	9
8	6	69	4	-0	34910	1550609	28556	1040684	11.99	8.67	25	0	0	.00	.00	15
8	6	70	1	140800	9925	462701	10937	376286	13.10	6.74	21	0	0	.00	.00	6
8	6	70	2	-0	32913	1461736	35529	1149220	13.85	8.59	22	0	0	.00	.00	12
8	6	70	3	-0	10659	362203	16089	629950	16.00	9.49	20	0	0	.00	.00	6
8	6	70	4	-0	37687	1700089	10022	271745	12.17	7.16	18	0	0	.00	.00	13
8	6	71	1	181050	19912	743203	13497	540611	13.80	7.27	28	0	0	.00	.00	10
8	6	71	2	-0	25827	885892	22906	965320	14.54	7.52	25	0	0	.00	.00	12
8	6	71	3	-0	31713	1245906	8655	273074	14.06	6.75	23	0	0	.00	.00	16
8	6	71	4	-0	32350	1585774	26261	901312	14.92	6.04	26	0	0	.00	.00	13
8	6	72	1	184500	24626	1247060	12890	503403	14.22	6.59	23	0	0	.00	.00	16
8	6	72	2	-0	36178	1551226	24139	1029529	15.99	5.93	21	0	0	.00	.00	14
8	6	72	3	-0	29207	1785329	23384	976622	14.94	5.97	23	0	0	.00	.00	11
8	6	72	4	-0	34171	1607932	34669	1525610	16.92	6.10	22	0	0	.00	.00	10
8	6	73	1	228650	28854	991128	35285	1554896	18.23	7.00	31	0	0	.00	.00	9
8	6	73	2	-0	33609	2024127	37632	1837607	17.74	7.58	23	0	0	.00	.00	12
8	6	73	3	-0	39749	2316086	10263	467096	18.05	8.26	30	0	0	.00	.00	11
8	6	73	4	-0	27588	2133031	18034	725852	17.26	9.03	32	0	0	.00	.00	6
8	6	74	1	237750	47047	3574247	15704	587355	17.06	6.10	20	0	0	.00	.00	16
8	6	74	2	-0	56073	4718149	46260	2436197	18.19	8.97	22	0	0	.00	.00	13
8	6	74	3	-0	33114	2470424	28752	1624330	19.37	9.88	25	0	0	.00	.00	6
8	6	74	4	-0	4897	324038	36262	2456879	19.93	6.56	19	0	0	.00	.00	2

DATA FURNISHED BY THE REGIONAL OR FOREST OFFICES

REG	FOR	FISCAL YEAR	FISCAL QTR	TOTAL SIC 24 CAPACITY	TOTAL SIC 26 CAPACITY	TOTAL CAPACITY	MILL SITE INVENTORY
8	6	64	3	.0	.0	.0	-.00
8	6	64	4	.0	.0	.0	-.00
8	6	65	1	.0	.0	.0	-.00
8	6	65	2	.0	.0	.0	-.00
8	6	65	3	.0	.0	.0	-.00
8	6	65	4	.0	.0	.0	-.00
8	6	66	1	.0	.0	.0	-.00
8	6	66	2	.0	.0	.0	-.00
8	6	66	3	.0	.0	.0	-.00
8	6	66	4	.0	.0	.0	-.00
8	6	67	1	.0	.0	.0	-.00
8	6	67	2	.0	.0	.0	-.00
8	6	67	3	.0	.0	.0	-.00
8	6	67	4	.0	.0	.0	-.00
8	6	68	1	.0	.0	.0	-.00
8	6	68	2	.0	.0	.0	-.00
8	6	68	3	.0	.0	.0	-.00
8	6	68	4	.0	.0	.0	-.00
8	6	69	1	.0	.0	.0	-.00
8	6	69	2	.0	.0	.0	-.00
8	6	69	3	.0	.0	.0	-.00
8	6	69	4	.0	.0	.0	-.00
8	6	70	1	.0	.0	.0	-.00
8	6	70	2	.0	.0	.0	-.00
8	6	70	3	.0	.0	.0	-.00
8	6	70	4	.0	.0	.0	-.00
8	6	71	1	.0	.0	.0	-.00
8	6	71	2	.0	.0	.0	-.00
8	6	71	3	.0	.0	.0	-.00
8	6	71	4	.0	.0	.0	-.00
8	6	72	1	.0	.0	.0	-.00
8	6	72	2	.0	.0	.0	-.00
8	6	72	3	.0	.0	.0	-.00
8	6	72	4	.0	.0	.0	-.00
8	6	73	1	.0	.0	.0	-.00
8	6	73	2	.0	.0	.0	-.00
8	6	73	3	.0	.0	.0	-.00
8	6	73	4	.0	.0	.0	-.00
8	6	74	1	.0	.0	.0	-.00
8	6	74	2	.0	.0	.0	-.00

DATA FURNISHED BY THE WASHINGTON OFFICE

REG	FOR	FISCAL YEAR	FISCAL QTR	UNCUT VOLUME UNDER CONTRACT	VOLUME SOLD	VALUE SOLD	VOLUME HARVESTED	VALUE HARVESTED	LOGGING COST	HAULING COST	HAUL DIST	VOLUME SOLD SUBJECT TO ESCALATION	VOLUME SOLD SUBJECT TO RATE REDET	RATE REDET PRICE CHANGE OLD	RATE REDET PRICE CHANGE NEW	NO OF SALES
8	9	63	1	96150	10610	272854	23221	563069	-.00	-.00	-0	-0	-0	-.00	-.00	-0
8	9	63	2	-0	23375	627232	32471	881237	-.00	-.00	-0	-0	-0	-.00	-.00	-0
8	9	63	3	-0	21690	590162	20964	559884	-.00	-.00	-0	-0	-0	-.00	-.00	-0
8	9	63	4	-0	42763	1239835	48419	1226097	-.00	-.00	-0	-0	-0	-.00	-.00	-0
8	9	64	1	85000	14677	392960	26961	747594	11.48	11.67	-0	0	0	.00	.00	13
8	9	64	2	-0	38899	949905	36267	985494	11.19	11.56	-0	0	0	.00	.00	28
8	9	64	3	-0	17217	401033	20286	481814	10.56	11.83	24	0	0	.00	.00	14
8	9	64	4	-0	43273	1220460	31908	860218	10.84	10.80	24	0	0	.00	.00	30
8	9	65	1	115050	13383	404941	21891	568341	9.86	10.20	22	0	0	.00	.00	13
8	9	65	2	-0	25661	783166	25873	740467	11.48	10.33	20	0	0	.00	.00	21
8	9	65	3	-0	17908	579356	24060	738409	10.93	10.86	21	0	0	.00	.00	14
8	9	65	4	-0	40520	1311260	34326	1022917	10.69	11.52	28	0	0	.00	.00	30
8	9	66	1	80750	5337	192843	32677	1043282	11.89	10.74	17	0	0	.00	.00	6
8	9	66	2	-0	19467	759467	31416	947472	10.80	11.22	21	0	0	.00	.00	16
8	9	66	3	-0	17743	643948	14518	516628	10.89	10.30	22	0	0	.00	.00	18
8	9	66	4	-0	48525	1781211	33459	1095273	11.06	9.60	22	0	0	.00	.00	44
8	9	67	1	79750	9051	317928	23127	896449	11.18	9.82	26	0	0	.00	.00	10
8	9	67	2	-0	28486	1054316	28190	1057875	11.42	10.00	19	0	0	.00	.00	32
8	9	67	3	-0	20088	751785	23464	887694	11.30	10.76	25	0	0	.00	.00	22
8	9	67	4	-0	44557	1621527	21666	737483	11.45	10.56	23	0	0	.00	.00	43
8	9	68	1	66850	14166	552125	22659	962529	11.77	10.50	17	0	0	.00	.00	17
8	9	68	2	-0	24087	852712	18313	693957	11.48	10.84	24	0	0	.00	.00	23
8	9	68	3	-0	14688	456228	15388	629534	12.49	9.22	23	0	0	.00	.00	20
8	9	68	4	-0	29756	1179973	19581	747124	12.56	10.51	22	0	0	.00	.00	26
8	9	69	1	131000	15897	564573	23411	873933	13.02	9.75	21	0	0	.00	.00	11
8	9	69	2	-0	29300	1121354	22291	774059	12.67	9.78	22	0	0	.00	.00	24
8	9	69	3	-0	23811	1241981	15004	626360	12.49	9.83	24	0	0	.00	.00	19
8	9	69	4	-0	33114	1345074	21053	847334	12.79	9.75	20	0	0	.00	.00	27
8	9	70	1	386500	22277	788580	17230	781295	12.88	9.19	23	0	0	.00	.00	21
8	9	70	2	-0	41134	1312436	25902	721284	12.85	9.91	21	0	0	.00	.00	35
8	9	70	3	-0	28671	809494	19080	827733	12.26	8.77	21	0	0	.00	.00	28
8	9	70	4	-0	44611	1122874	25019	789112	11.89	9.82	24	0	0	.00	.00	35
8	9	71	1	222850	24751	696816	16392	580012	12.26	9.46	24	0	0	.00	.00	25
8	9	71	2	-0	36177	912839	20206	653909	12.93	8.47	19	0	0	.00	.00	26
8	9	71	3	-0	18051	405017	16961	632787	12.64	10.94	27	0	0	.00	.00	12
8	9	71	4	-0	71846	1802704	43318	1263160	14.40	9.80	21	0	0	.00	.00	42
8	9	72	1	605400	38048	994791	18549	507544	14.49	9.60	20	0	0	.00	.00	22
8	9	72	2	-0	24536	569868	25964	747284	14.32	8.23	18	0	0	.00	.00	18
8	9	72	3	-0	56743	1778166	21363	729276	15.43	10.26	23	0	0	.00	.00	31
8	9	72	4	-0	44272	1356740	51808	1538457	15.69	12.18	27	0	0	.00	.00	27
8	9	73	1	306200	46041	1537390	32071	1060599	16.34	11.04	23	0	0	.00	.00	34
8	9	73	2	-0	70657	2330012	41017	1062724	16.67	10.51	22	0	0	.00	.00	37
8	9	73	3	-0	20780	1109627	19784	834953	17.10	11.14	22	0	0	.00	.00	14
8	9	73	4	-0	37871	1272440	35142	927711	16.75	10.95	22	0	0	.00	.00	17
8	9	74	1	330050	48422	1791398	42724	1438598	15.83	9.38	21	0	0	.00	.00	20
8	9	74	2	-0	74604	3569482	40572	1069078	17.76	11.19	25	0	0	.00	.00	30
8	9	74	3	-0	34835	1523292	20965	664221	18.95	9.73	21	0	0	.00	.00	20
8	9	74	4	-0	4015	269076	40192	1135159	24.51	11.61	20	0	0	.00	.00	6

DATA FURNISHED BY THE REGIONAL OR FOREST OFFICES

REG	FOR	FISCAL YEAR	FISCAL QTR	TOTAL STC 24 CAPACITY	TOTAL STC 26 CAPACITY	TOTAL CAPACITY	MILL SITE INVENTORY
8	9	64	3	.0	.0	.0	-.00
8	9	64	4	.0	.0	.0	-.00
8	9	65	1	.0	.0	.0	-.00
8	9	65	2	.0	.0	.0	-.00
8	9	65	3	.0	.0	.0	-.00
8	9	65	4	.0	.0	.0	-.00
8	9	66	1	.0	.0	.0	-.00
8	9	66	2	.0	.0	.0	-.00
8	9	66	3	.0	.0	.0	-.00
8	9	66	4	.0	.0	.0	-.00
8	9	67	1	.0	.0	.0	-.00
8	9	67	2	.0	.0	.0	-.00
8	9	67	3	.0	.0	.0	-.00
8	9	67	4	.0	.0	.0	-.00
8	9	68	1	.0	.0	.0	-.00
8	9	68	2	.0	.0	.0	-.00
8	9	68	3	.0	.0	.0	-.00
8	9	68	4	.0	.0	.0	-.00
8	9	69	1	.0	.0	.0	-.00
8	9	69	2	.0	.0	.0	-.00
8	9	69	3	.0	.0	.0	-.00
8	9	69	4	.0	.0	.0	-.00
8	9	70	1	.0	.0	.0	-.00
8	9	70	2	.0	.0	.0	-.00
8	9	70	3	.0	.0	.0	-.00
8	9	70	4	.0	.0	.0	-.00
8	9	71	1	.0	.0	.0	-.00
8	9	71	2	.0	.0	.0	-.00
8	9	71	3	.0	.0	.0	-.00
8	9	71	4	.0	.0	.0	-.00
8	9	72	1	.0	.0	.0	-.00
8	9	72	2	.0	.0	.0	-.00
8	9	72	3	.0	.0	.0	-.00
8	9	72	4	.0	.0	.0	-.00
8	9	73	1	.0	.0	.0	-.00
8	9	73	2	.0	.0	.0	-.00
8	9	73	3	.0	.0	.0	-.00
8	9	73	4	.0	.0	.0	-.00
8	9	74	1	.0	.0	.0	-.00
8	9	74	2	.0	.0	.0	-.00

DATA FURNISHED BY THE WASHINGTON OFFICE

REG	FOR	FISCAL YEAR	FISCAL QTR	UNCUT VOLUME UNDER CONTRACT	VOLUME SOLD	VALUE SOLD	VOLUME HARVESTED	VALUE HARVESTED	LOGGING COST	HAULING COST	HAUL DIST	VOLUME SOLD SUBJECT TO RATE REDET: ESCALATION	VOLUME SOLD SUBJECT TO RATE REDET: RATE REDET	RATE REDET PRICE CHANGE: OLD	RATE REDET PRICE CHANGE: NEW	NO OF SALES
8	10	63	1	51000	1126	17709	3600	137053	-.00	-.00	-0	-0	-0	-.00	-.00	-0
8	10	63	2	-0	10391	315340	9437	205296	-.00	-.00	-0	-0	-0	-.00	-.00	-0
8	10	63	3	-0	10891	213701	6219	196137	-.00	-.00	-0	-0	-0	-.00	-.00	-0
8	10	63	4	-0	16501	739995	8615	156951	-.00	-.00	-0	-0	-0	-.00	-.00	-0
8	10	64	1	32050	1224	22540	6606	118205	8.82	11.34	-0	0	0	.00	.00	3
8	10	64	2	-0	7846	159247	16783	321456	10.20	11.91	-0	0	0	.00	.00	7
8	10	64	3	-0	4944	111167	5571	122790	12.78	10.96	33	0	0	.00	.00	4
8	10	64	4	-0	9745	228717	10623	169145	12.28	11.13	35	0	0	.00	.00	12
8	10	65	1	58600	3619	93671	10255	325747	12.28	11.62	28	0	0	.00	.00	5
8	10	65	2	-0	5152	125668	11445	242830	14.71	12.77	26	0	0	.00	.00	11
8	10	65	3	-0	11174	130146	3611	74747	14.71	13.25	24	0	0	.00	.00	11
8	10	65	4	-0	10359	195625	10923	201207	12.92	12.83	34	0	0	.00	.00	14
8	10	66	1	28100	655	3380	3086	66577	8.00	13.00	24	0	0	.00	.00	1
8	10	66	2	-0	5023	132117	4657	95277	12.25	12.72	31	0	0	.00	.00	8
8	10	66	3	-0	2768	69016	5264	114186	16.32	8.74	30	0	0	.00	.00	7
8	10	66	4	-0	6302	158265	7536	146973	14.57	14.20	31	0	0	.00	.00	12
8	10	67	1	27800	819	21954	4491	89991	15.52	13.07	22	0	0	.00	.00	2
8	10	67	2	-0	6075	104877	4449	86391	12.95	11.55	25	0	0	.00	.00	9
8	10	67	3	-0	5302	140388	3267	64919	14.44	14.21	35	0	0	.00	.00	10
8	10	67	4	-0	7616	145005	4741	107322	12.44	12.57	26	0	0	.00	.00	11
8	10	68	1	31750	1887	64580	4411	103328	15.56	15.52	38	0	0	.00	.00	5
8	10	68	2	-0	6311	130659	6456	148021	15.06	12.80	28	0	0	.00	.00	8
8	10	68	3	-0	3278	71268	3196	70617	14.05	14.36	28	0	0	.00	.00	10
8	10	68	4	-0	9713	229297	5596	131371	13.69	13.89	30	0	0	.00	.00	14
8	10	69	1	40205	1487	57680	5837	128776	14.63	15.25	34	0	0	.00	.00	4
8	10	69	2	-0	7903	213822	3031	63607	13.83	14.00	26	0	0	.00	.00	13
8	10	69	3	-0	4825	189337	4314	90867	13.85	14.97	31	0	0	.00	.00	12
8	10	69	4	-0	10181	351141	5165	136540	15.76	12.02	27	0	0	.00	.00	18
8	10	70	1	49900	2498	52956	6516	156658	13.72	13.36	37	0	0	.00	.00	4
8	10	70	2	-0	4554	149917	7474	215076	18.59	11.72	20	0	0	.00	.00	14
8	10	70	3	-0	5063	169737	2655	86775	14.44	14.23	29	0	0	.00	.00	10
8	10	70	4	-0	14751	371989	7210	247471	15.21	13.86	28	0	0	.00	.00	28
8	10	71	1	45050	1643	14582	10295	250938	13.49	9.63	25	0	0	.00	.00	3
8	10	71	2	-0	5563	157584	3662	110631	14.06	10.66	17	0	0	.00	.00	13
8	10	71	3	-0	5185	157302	11321	311259	14.41	12.66	26	0	0	.00	.00	9
8	10	71	4	-0	9052	260658	6315	171774	14.04	13.63	28	0	0	.00	.00	24
8	10	72	1	39900	886	19909	9128	264921	10.82	14.42	22	0	0	.00	.00	2
8	10	72	2	-0	8523	305702	5869	175323	15.51	12.53	23	0	0	.00	.00	17
8	10	72	3	-0	9957	304520	6495	213560	15.74	11.90	25	0	0	.00	.00	20
8	10	72	4	-0	10985	420476	7427	187397	15.62	10.45	21	0	0	.00	.00	27
8	10	73	1	40300	1	0	6912	210713	.00	.00	0	0	0	.00	.00	0
8	10	73	2	-0	7812	376732	4040	172395	14.95	10.62	23	0	0	.00	.00	15
8	10	73	3	-0	7897	441526	3474	126540	15.70	9.10	19	0	0	.00	.00	14
8	10	73	4	-0	16046	722344	4123	189248	15.32	9.70	22	0	0	.00	.00	29
8	10	74	1	47400	6239	324404	7906	312722	17.00	11.42	28	0	0	.00	.00	6
8	10	74	2	-0	12992	595459	9572	328247	15.80	11.23	28	0	0	.00	.00	12
8	10	74	3	-0	1877	117426	8675	392726	28.03	6.90	23	0	0	.00	.00	3
8	10	74	4	-0	2495	93202	4341	209744	24.07	17.80	24	0	0	.00	.00	10

DATA FURNISHED BY THE REGIONAL OR FOREST OFFICES

REG	FOR	FISCAL YEAR	FISCAL QTR	TOTAL SIC 24 CAPACITY	TOTAL SIC 26 CAPACITY	TOTAL CAPACITY	MILL SITE INVENTORY
8	10	64	3	.0	.0	.0	-.00
8	10	64	4	.0	.0	.0	-.00
8	10	65	1	.0	.0	.0	-.00
8	10	65	2	.0	.0	.0	-.00
8	10	65	3	.0	.0	.0	-.00
8	10	65	4	.0	.0	.0	-.00
8	10	66	1	.0	.0	.0	-.00
8	10	66	2	.0	.0	.0	-.00
8	10	66	3	.0	.0	.0	-.00
8	10	66	4	.0	.0	.0	-.00
8	10	67	1	.0	.0	.0	-.00
8	10	67	2	.0	.0	.0	-.00
8	10	67	3	.0	.0	.0	-.00
8	10	67	4	.0	.0	.0	-.00
8	10	68	1	.0	.0	.0	-.00
8	10	68	2	.0	.0	.0	-.00
8	10	68	3	.0	.0	.0	-.00
8	10	68	4	.0	.0	.0	-.00
8	10	69	1	.0	.0	.0	-.00
8	10	69	2	.0	.0	.0	-.00
8	10	69	3	.0	.0	.0	-.00
8	10	69	4	.0	.0	.0	-.00
8	10	70	1	.0	.0	.0	-.00
8	10	70	2	.0	.0	.0	-.00
8	10	70	3	.0	.0	.0	-.00
8	10	70	4	.0	.0	.0	-.00
8	10	71	1	.0	.0	.0	-.00
8	10	71	2	.0	.0	.0	-.00
8	10	71	3	.0	.0	.0	-.00
8	10	71	4	.0	.0	.0	-.00
8	10	72	1	.0	.0	.0	-.00
8	10	72	2	.0	.0	.0	-.00
8	10	72	3	.0	.0	.0	-.00
8	10	72	4	.0	.0	.0	-.00
8	10	73	1	.0	.0	.0	-.00
8	10	73	2	.0	.0	.0	-.00
8	10	73	3	.0	.0	.0	-.00
8	10	73	4	.0	.0	.0	-.00
8	10	74	1	.0	.0	.0	-.00
8	10	74	2	.0	.0	.0	-.00

DATA FURNISHED BY THE WASHINGTON OFFICE

REG	FOR	FISCAL YEAR	FISCAL QTR	UNCUT VOLUME UNDER CONTRACT	VOLUME SOLD	VALUE SOLD	VOLUME HARVESTED	VALUE HARVESTED	LOGGING COST	HAULING COST	HAUL DTST	VOLUME SOLD SUBJECT TO RATE REDET PRICE CHANGE: ESCALATION	RATE REDET	RATE REDET PRICE CHANGE: OLD	RATE REDET PRICE CHANGE: NEW	NO OF SALES
8	13	63	1	75600	4802	96417	15025	431409	-.00	-.00	-0	-0	-0	-.00	-.00	-0
8	13	63	2	-0	9383	168539	17455	384281	-.00	-.00	-0	-0	-0	-.00	-.00	-0
8	13	63	3	-0	16668	298594	13891	274872	-.00	-.00	-0	-0	-0	-.00	-.00	-0
8	13	63	4	-0	36752	806685	18653	350039	-.00	-.00	-0	-0	-0	-.00	-.00	-0
8	13	64	1	99800	16836	336128	20512	406228	23.19	.69	-0	0	0	.00	.00	10
8	13	64	2	-0	31165	672206	25309	515632	12.15	12.21	-0	0	0	.00	.00	15
8	13	64	3	-0	23360	508893	16723	363882	10.75	14.12	33	0	0	.00	.00	13
8	13	64	4	-0	22172	578757	23978	493551	10.33	14.33	33	0	0	.00	.00	10
8	13	65	1	104000	19634	443549	22235	482225	10.90	15.23	35	0	0	.00	.00	10
8	13	65	2	-0	32177	832599	25885	618242	10.62	13.04	29	0	0	.00	.00	13
8	13	65	3	-0	26751	747862	16962	484978	10.94	11.92	30	0	0	.00	.00	10
8	13	65	4	-0	22261	701316	20307	446187	9.62	13.95	24	0	0	.00	.00	9
8	13	66	1	95850	15727	528242	22878	530962	9.23	12.28	23	0	0	.00	.00	6
8	13	66	2	-0	34860	1184559	29874	771019	11.74	11.74	24	0	0	.00	.00	14
8	13	66	3	-0	6378	214805	10619	268311	12.35	12.98	36	0	0	.00	.00	5
8	13	66	4	-0	32192	1283741	27955	853649	12.37	12.03	24	0	0	.00	.00	13
8	13	67	1	68690	10385	465748	29368	1030491	11.33	11.86	19	0	0	.00	.00	6
8	13	67	2	-0	5467	189012	27237	910433	10.72	12.92	22	0	0	.00	.00	4
8	13	67	3	-0	15257	529604	15761	546859	12.42	10.65	17	0	0	.00	.00	8
8	13	67	4	-0	24863	939216	20072	712484	11.75	11.92	26	0	0	.00	.00	18
8	13	68	1	61500	1358	49366	20925	795920	11.73	12.35	26	0	0	.00	.00	2
8	13	68	2	-0	15635	602066	11043	420303	10.46	12.29	30	0	0	.00	.00	9
8	13	68	3	-0	19624	758210	10858	423490	11.48	12.45	19	0	0	.00	.00	12
8	13	68	4	-0	17850	763990	10187	411016	11.81	13.74	19	0	0	.00	.00	22
8	13	69	1	79950	13632	614671	10317	388915	12.22	14.10	38	0	0	.00	.00	6
8	13	69	2	-0	17700	625780	15955	622069	11.93	11.36	25	0	0	.00	.00	8
8	13	69	3	-0	6361	170249	6875	275187	14.92	10.00	20	0	0	.00	.00	6
8	13	69	4	-0	41365	2467084	21769	945522	11.51	11.98	29	0	0	.00	.00	20
8	13	70	1	105050	9960	519685	14931	652182	13.54	10.48	16	0	0	.00	.00	5
8	13	70	2	-0	15968	639396	14612	588775	10.84	12.27	32	0	0	.00	.00	12
8	13	70	3	-0	10188	427409	11375	518063	10.50	12.27	28	0	0	.00	.00	6
8	13	70	4	-0	32698	1167662	13061	577488	10.44	10.46	25	0	0	.00	.00	18
8	13	71	1	102650	7075	201996	13756	572225	11.82	9.99	19	0	0	.00	.00	9
8	13	71	2	-0	11855	311924	17463	738711	12.09	11.48	29	0	0	.00	.00	11
8	13	71	3	-0	11925	395718	13692	550626	12.21	11.96	28	0	0	.00	.00	11
8	13	71	4	-0	47755	2434851	26228	1304738	10.60	9.69	20	0	0	.00	.00	21
8	13	72	1	107100	164	8163	14870	760215	11.77	8.82	21	0	0	.00	.00	2
8	13	72	2	-0	18932	784566	15719	782300	13.06	10.80	26	0	0	.00	.00	15
8	13	72	3	-0	22091	1353023	17147	719595	13.58	9.79	21	0	0	.00	.00	16
8	13	72	4	-0	39153	2128309	26371	1417844	13.64	10.99	21	0	0	.00	.00	21
8	13	73	1	126150	10847	670680	25496	1441497	12.81	11.15	26	0	0	.00	.00	8
8	13	73	2	-0	5597	422947	11775	579810	15.43	9.02	18	0	0	.00	.00	8
8	13	73	3	-0	7522	337865	2886	142299	14.29	11.01	24	0	0	.00	.00	7
8	13	73	4	-0	48093	4291769	8588	500314	16.82	13.18	27	0	0	.00	.00	31
8	13	74	1	124500	17780	1045577	20542	20541	14.67	11.89	29	0	0	.00	.00	10
8	13	74	2	-0	20221	1495994	9316	544769	17.25	9.74	18	0	0	.00	.00	12
8	13	74	3	-0	9627	777731	4413	372641	16.45	12.92	24	0	0	.00	.00	8
8	13	74	4	-0	3041	227127	16558	1266641	24.97	11.06	21	0	0	.00	.00	14

DATA FURNISHED BY THE REGIONAL OR FOREST OFFICES

REG	FOR	FISCAL YEAR	FISCAL QTR	TOTAL SIC 24 CAPACITY	TOTAL SIC 26 CAPACITY	TOTAL CAPACITY	MILL SITE INVENTORY
8	13	64	3	.0	.0	.0	-.00
8	13	64	4	.0	.0	.0	-.00
8	13	65	1	.0	.0	.0	-.00
8	13	65	2	.0	.0	.0	-.00
8	13	65	3	.0	.0	.0	-.00
8	13	65	4	.0	.0	.0	-.00
8	13	66	1	.0	.0	.0	-.00
8	13	66	2	.0	.0	.0	-.00
8	13	66	3	.0	.0	.0	-.00
8	13	66	4	.0	.0	.0	-.00
8	13	67	1	.0	.0	.0	-.00
8	13	67	2	.0	.0	.0	-.00
8	13	67	3	.0	.0	.0	-.00
8	13	67	4	.0	.0	.0	-.00
8	13	68	1	.0	.0	.0	-.00
8	13	68	2	.0	.0	.0	-.00
8	13	68	3	.0	.0	.0	-.00
8	13	68	4	.0	.0	.0	-.00
8	13	69	1	.0	.0	.0	-.00
8	13	69	2	.0	.0	.0	-.00
8	13	69	3	.0	.0	.0	-.00
8	13	69	4	.0	.0	.0	-.00
8	13	70	1	.0	.0	.0	-.00
8	13	70	2	.0	.0	.0	-.00
8	13	70	3	.0	.0	.0	-.00
8	13	70	4	.0	.0	.0	-.00
8	13	71	1	.0	.0	.0	-.00
8	13	71	2	.0	.0	.0	-.00
8	13	71	3	.0	.0	.0	-.00
8	13	71	4	.0	.0	.0	-.00
8	13	72	1	.0	.0	.0	-.00
8	13	72	2	.0	.0	.0	-.00
8	13	72	3	.0	.0	.0	-.00
8	13	72	4	.0	.0	.0	-.00
8	13	73	1	.0	.0	.0	-.00
8	13	73	2	.0	.0	.0	-.00
8	13	73	3	.0	.0	.0	-.00
8	13	73	4	.0	.0	.0	-.00
8	13	74	1	.0	.0	.0	-.00
8	13	74	2	.0	.0	.0	-.00

DATA FURNISHED BY THE WASHINGTON OFFICE

REG	FOR	FISCAL YEAR	FISCAL QTR	UNCUT VOLUME UNDER CONTRACT	VOLUME SOLD	VALUE SOLD	VOLUME HARVESTED	VALUE HARVESTED	LOGGING COST	HAULING COST	HAUL DIST	VOLUME SOLD SUBJECT TO RATE REDET: ESCALATION	VOLUME SOLD SUBJECT TO RATE REDET: RATE REDET	RATE REDET PRICE CHANGE: OLD	RATE REDET PRICE CHANGE: NEW	NO OF SALES
9	3	63	1	94400	1	-0	1	-0	-.00	-.00	-0	-0	-0	-.00	-.00	-0
9	3	63	2	-0	1	-0	1	-0	-.00	-.00	-0	-0	-0	-.00	-.00	-0
9	3	63	3	-0	1	-0	1	-0	-.00	-.00	-0	-0	-0	-.00	-.00	-0
9	3	63	4	-0	13927	68320	10015	53753	-.00	-.00	-0	-0	-0	-.00	-.00	-0
9	3	64	1	10104050	1	-0	1	-0	18.32	5.24	-0	0	0	.00	.00	1
9	3	64	2	-0	1	-0	1	-0	16.37	5.64	-0	0	0	.00	.00	7
9	3	64	3	-0	1	-0	1	-0	16.45	5.85	21	0	0	.00	.00	7
9	3	64	4	-0	20080	94601	6499	35176	16.98	6.65	18	0	0	.00	.00	13
9	3	65	1	103450	1	-0	1	-0	18.12	5.11	14	0	0	.00	.00	2
9	3	65	2	-0	1	-0	1	-0	16.74	7.51	15	0	0	.00	.00	6
9	3	65	3	-0	1	-0	1	-0	16.33	7.49	17	0	0	.00	.00	5
9	3	65	4	-0	21622	79642	10161	56347	16.51	6.84	17	0	0	.00	.00	6
9	3	66	1	132500	2396	21998	3980	23420	16.62	6.52	10	0	0	.00	.00	3
9	3	66	2	-0	840	5478	9254	51489	15.86	6.03	14	0	0	.00	.00	1
9	3	66	3	-0	8750	78734	4894	45077	16.35	7.81	12	0	0	.00	.00	11
9	3	66	4	-0	5180	56122	9263	34108	16.96	6.38	11	0	0	.00	.00	6
9	3	67	1	159500	1	-0	5015	51840	.00	.00	0	0	0	.00	.00	0
9	3	67	2	-0	45964	90446	9215	45351	15.56	5.93	28	0	0	.00	.00	5
9	3	67	3	-0	4796	40966	5310	54004	17.27	6.61	10	0	0	.00	.00	7
9	3	67	4	-0	9124	75489	3427	40425	18.05	6.84	10	0	0	.00	.00	8
9	3	68	1	163500	3519	42808	5238	31468	18.18	7.21	16	0	0	.00	.00	4
9	3	68	2	-0	2209	33979	5227	49394	18.40	7.24	18	0	0	.00	.00	3
9	3	68	3	-0	3645	24916	6522	75201	18.61	6.70	16	0	0	.00	.00	5
9	3	68	4	-0	22357	126677	9772	36928	15.75	6.44	16	0	0	.00	.00	14
9	3	69	1	175500	8183	26907	4098	26867	17.59	7.32	12	0	0	.00	.00	3
9	3	69	2	-0	2674	34244	6508	54196	16.90	8.04	11	0	0	.00	.00	4
9	3	69	3	-0	6575	51699	2662	23759	18.95	8.01	23	0	0	.00	.00	8
9	3	69	4	-0	15718	102714	5489	26808	17.94	7.34	16	0	0	.00	.00	14
9	3	70	1	169000	1165	4648	6302	46225	18.59	8.04	37	0	0	.00	.00	1
9	3	70	2	-0	9651	62925	7857	54982	17.99	8.45	14	0	0	.00	.00	6
9	3	70	2	-0	20165	153054	9148	70176	17.64	7.91	15	0	0	.00	.00	11
9	3	70	4	-0	8501	46729	3668	37865	16.66	7.98	26	0	0	.00	.00	6
9	3	71	1	178450	5946	55963	9653	41297	18.26	8.26	11	0	0	.00	.00	4
9	3	71	2	-0	15670	119086	6291	54644	19.10	7.50	14	0	0	.00	.00	10
9	3	71	3	-0	2127	32436	9648	80260	21.20	7.70	10	0	0	.00	.00	2
9	3	71	4	-0	15603	140204	1766	13270	18.83	8.65	17	0	0	.00	.00	10
9	3	72	1	171500	600	9305	4931	31509	20.58	7.30	2	0	0	.00	.00	1
9	3	72	2	-0	1909	53856	14208	123932	16.24	7.58	17	0	0	.00	.00	1
9	3	72	3	-0	14593	117763	11374	92346	16.34	7.99	18	0	0	.00	.00	8
9	3	72	4	-0	15318	118006	6749	48308	15.87	7.67	11	0	0	.00	.00	11
9	3	73	1	386000	465	6510	6643	48667	13.05	7.00	10	0	0	.00	.00	1
9	3	73	2	-0	7126	84079	6547	54758	23.15	9.12	9	0	0	.00	.00	9
9	3	73	3	-0	12593	165220	7866	81098	17.23	8.13	21	0	0	.00	.00	9
9	3	73	4	-0	16657	250846	7377	57612	15.06	8.38	14	0	0	.00	.00	14
9	3	74	1	338000	1685	9953	5767	50564	16.16	10.99	40	0	0	.00	.00	2
9	3	74	2	-0	25078	379234	13040	118178	16.13	8.54	20	0	0	.00	.00	23
9	3	74	3	-0	13806	182213	12017	136735	18.71	8.73	22	0	0	.00	.00	13
9	3	74	4	-0	10948	66854	4873	53528	19.29	10.88	24	0	0	.00	.00	8

DATA FURNISHED BY THE REGIONAL OR FOREST OFFICES

REG	FOR	FISCAL YEAR	FISCAL QTR	TOTAL STC 24 CAPACITY	TOTAL STC 26 CAPACITY	TOTAL CAPACITY	MILL SITE INVENTORY
9	3	64	3	284.4	900.0	1184.4	.92
9	3	64	4	284.4	900.0	1184.4	.76
9	3	65	1	284.4	900.0	1184.4	.56
9	3	65	2	284.4	900.0	1184.4	.48
9	3	65	3	284.4	900.0	1184.4	.66
9	3	65	4	284.4	900.0	1184.4	.62
9	3	66	1	284.4	900.0	1184.4	.48
9	3	66	2	284.4	900.0	1184.4	.30
9	3	66	3	284.4	900.0	1184.4	.64
9	3	66	4	284.4	900.0	1184.4	.50
9	3	67	1	284.4	900.0	1184.4	.60
9	3	67	2	284.4	950.0	1234.4	.62
9	3	67	3	284.4	950.0	1234.4	.60
9	3	67	4	284.4	950.0	1234.4	.41
9	3	68	1	284.4	950.0	1234.4	.48
9	3	68	2	284.4	950.0	1234.4	.40
9	3	68	3	284.4	950.0	1234.4	.51
9	3	68	4	284.4	950.0	1234.4	.44
9	3	69	1	284.4	950.0	1234.4	.39
9	3	69	2	284.4	950.0	1234.4	.32
9	3	69	3	284.4	950.0	1234.4	.41
9	3	69	4	330.4	950.0	1280.4	.32
9	3	70	1	330.4	950.0	1280.4	.41
9	3	70	2	330.4	950.0	1280.4	.31
9	3	70	2	330.4	950.0	1280.4	.48
9	3	70	4	330.4	950.0	1280.4	.44
9	3	71	1	330.4	950.0	1280.4	.55
9	3	71	2	330.4	950.0	1280.4	.47
9	3	71	3	330.4	950.0	1280.4	.55
9	3	71	4	330.4	950.0	1280.4	.48
9	3	72	1	330.4	950.0	1280.4	.51
9	3	72	2	330.4	950.0	1280.4	.35
9	3	72	3	330.4	950.0	1280.4	.41
9	3	72	4	330.4	950.0	1280.4	.35
9	3	73	1	330.4	950.0	1280.4	.35
9	3	73	2	330.4	950.0	1280.4	.31
9	3	73	3	330.4	950.0	1280.4	.59
9	3	73	4	330.4	950.0	1280.4	.49
9	3	74	1	330.4	950.0	1280.4	.49
9	3	74	2	330.4	950.0	1280.4	.35

DATA FURNISHED BY THE WASHINGTON OFFICE

REG	FOR	FISCAL YEAR	FISCAL QTR	UNCUT VOLUME UNDER CONTRACT	VOLUME SOLD	VALUE SOLD	VOLUME HARVESTED	VALUE HARVESTED	LOGGING COST	HAULING COST	HAUL DIST	VOLUME SOLD SUBJECT TO ESCALATION	VOLUME SOLD SUBJECT TO RATE REDET	RATE REDET PRICE CHANGE OLD	RATE REDET PRICE CHANGE NEW	NO OF SALES
9	4	63	1	176550	1	-0	1	-0	-.00	-.00	-0	-0	-0	-.00	-.00	-0
9	4	63	2	-0	1	-0	1	-0	-.00	-.00	-0	-0	-0	-.00	-.00	-0
9	4	63	3	-0	1	-0	1	-0	-.00	-.00	-0	-0	-0	-.00	-.00	-0
9	4	63	4	-0	14152	72233	16625	75193	-.00	-.00	-0	-0	-0	-.00	-.00	-0
9	4	64	1	163050	1	-0	1	-0	16.08	6.03	-0	0	0	.00	.00	4
9	4	64	2	-0	1	-0	1	-0	13.60	6.61	-0	0	0	.00	.00	4
9	4	64	3	-0	1	-0	1	-0	16.35	5.19	29	0	0	.00	.00	2
9	4	64	4	-0	31295	138011	14811	63125	14.36	5.64	19	0	0	.00	.00	13
9	4	65	1	163400	1	-0	1	-0	14.92	5.76	34	0	0	.00	.00	6
9	4	65	2	-0	1	-0	1	-0	14.56	6.88	19	0	0	.00	.00	7
9	4	65	3	-0	1	-0	1	-0	15.42	6.62	17	0	0	.00	.00	7
9	4	65	4	-0	19612	77242	22049	103237	12.25	8.68	41	0	0	.00	.00	9
9	4	66	1	190750	2290	11040	9512	38926	14.80	6.20	18	0	0	.00	.00	6
9	4	66	2	-0	7237	33106	8941	40903	13.78	7.32	27	0	0	.00	.00	6
9	4	66	3	-0	15826	56761	10064	53782	13.89	8.34	40	0	0	.00	.00	9
9	4	66	4	-0	10771	43392	14647	70870	16.19	9.41	42	0	0	.00	.00	8
9	4	67	1	191850	2300	11060	32017	43974	18.42	7.88	22	0	0	.00	.00	3
9	4	67	2	-0	13135	57529	11952	53902	16.22	11.14	71	0	0	.00	.00	7
9	4	67	3	-0	11366	68743	9389	41642	15.42	10.44	32	0	0	.00	.00	6
9	4	67	4	-0	24034	83542	13473	69324	15.94	9.42	57	0	0	.00	.00	7
9	4	68	1	171700	1	-0	29457	54551	.00	.00	69	0	0	.00	.00	0
9	4	68	2	-0	4472	24813	11315	40813	16.39	7.57	35	0	0	.00	.00	2
9	4	68	3	-0	22505	34141	1112	47780	16.46	8.13	37	0	0	.00	.00	3
9	4	68	4	-0	8786	41394	12219	44815	19.47	9.75	43	0	0	.00	.00	6
9	4	69	1	201750	10110	53340	11565	45435	16.96	10.22	50	0	0	.00	.00	6
9	4	69	2	-0	6909	27732	13542	51629	19.11	10.55	28	0	0	.00	.00	4
9	4	69	3	-0	8281	37843	8968	40224	18.94	9.60	29	0	0	.00	.00	6
9	4	69	4	-0	63512	234037	17625	74383	16.67	11.23	53	0	0	.00	.00	5
9	4	70	1	217850	12259	74458	13021	53070	17.35	10.44	38	0	0	.00	.00	6
9	4	70	2	-0	12585	69245	13660	61269	18.60	9.91	30	0	0	.00	.00	10
9	4	70	3	-0	5492	41240	12622	62516	18.84	10.17	14	0	0	.00	.00	6
9	4	70	4	-0	41323	155910	18445	78040	17.00	10.83	56	0	0	.00	.00	10
9	4	71	1	205500	8702	56905	17181	80227	18.20	11.23	56	0	0	.00	.00	6
9	4	71	2	-0	11630	71479	15803	67671	18.92	12.03	60	0	0	.00	.00	12
9	4	71	3	-0	455	3176	9254	47002	20.44	10.40	49	0	0	.00	.00	1
9	4	71	4	-0	26326	146800	15745	82136	18.81	12.80	76	0	0	.00	.00	12
9	4	72	1	195000	1332	5623	6614	38779	21.60	16.40	117	0	0	.00	.00	1
9	4	72	2	-0	16125	78002	13970	75674	18.16	12.33	81	0	0	.00	.00	5
9	4	72	3	-0	1	0	9446	56987	20.56	14.26	81	0	0	.00	.00	3
9	4	72	4	-0	15345	98634	11124	60137	16.98	11.38	18	0	0	.00	.00	13
9	4	73	1	197200	3100	20090	10378	51411	17.22	11.63	35	0	0	.00	.00	3
9	4	73	2	-0	13544	74301	16010	79440	17.34	13.68	69	0	0	.00	.00	8
9	4	73	3	-0	12438	76703	6911	32308	17.95	14.68	76	0	0	.00	.00	8
9	4	73	4	-0	20644	167202	9734	72314	19.04	15.80	74	0	0	.00	.00	13
9	4	74	1	213900	11791	79571	11294	38039	17.47	14.36	61	0	0	.00	.00	3
9	4	74	2	-0	24714	235191	17724	59826	18.25	18.28	60	0	0	.00	.00	7
9	4	74	3	-0	11106	138208	14204	66559	19.04	11.61	45	0	0	.00	.00	4
9	4	74	4	-0	6214	63901	23924	100982	18.50	11.15	51	0	0	.00	.00	2

DATA FURNISHED BY THE REGIONAL OR FOREST OFFICES

REG	FOR	FISCAL YEAR	FISCAL QTR	TOTAL SIC 24 CAPACITY	TOTAL SIC 26 CAPACITY	TOTAL CAPACITY	MILL SITE INVENTORY
9	4	64	3	54.0	330.3	384.3	-.00
9	4	64	4	54.0	330.3	384.3	-.00
9	4	65	1	54.0	330.3	384.3	-.00
9	4	65	2	54.0	330.3	384.3	-.00
9	4	65	3	54.0	330.3	384.3	-.00
9	4	65	4	54.0	330.3	384.3	-.00
9	4	66	1	54.0	330.3	384.3	-.00
9	4	66	2	54.0	330.3	384.3	-.00
9	4	66	3	54.0	330.3	384.3	-.00
9	4	66	4	54.0	330.3	384.3	-.00
9	4	67	1	54.0	330.3	384.3	-.00
9	4	67	2	54.0	330.3	384.3	-.00
9	4	67	3	54.0	330.3	384.3	-.00
9	4	67	4	54.0	330.3	384.3	-.00
9	4	68	1	54.0	330.3	384.3	-.00
9	4	68	2	54.0	330.3	384.3	-.00
9	4	68	3	54.0	330.3	384.3	-.00
9	4	68	4	54.0	330.3	384.3	-.00
9	4	69	1	54.0	330.3	384.3	-.00
9	4	69	2	54.0	330.3	384.3	-.00
9	4	69	3	54.0	330.3	384.3	-.00
9	4	69	4	54.0	330.3	384.3	-.00
9	4	70	1	54.0	330.3	384.3	-.00
9	4	70	2	54.0	330.3	384.3	-.00
9	4	70	3	54.0	330.3	384.3	-.00
9	4	70	4	54.0	330.3	384.3	-.00
9	4	71	1	54.0	330.3	384.3	-.00
9	4	71	2	54.0	330.3	384.3	-.00
9	4	71	3	54.0	330.3	384.3	-.00
9	4	71	4	54.0	330.3	384.3	-.00
9	4	72	1	54.0	330.3	384.3	-.00
9	4	72	2	54.0	330.3	384.3	-.00
9	4	72	3	54.0	330.3	384.3	-.00
9	4	72	4	54.0	330.3	384.3	-.00
9	4	73	1	54.0	330.3	384.3	-.00
9	4	73	2	54.0	330.3	384.3	-.00
9	4	73	3	54.0	330.3	384.3	-.00
9	4	73	4	54.0	330.3	384.3	-.00
9	4	74	1	54.0	330.3	384.3	-.00
9	4	74	2	54.0	330.3	384.3	-.00

DATA FURNISHED BY THE WASHINGTON OFFICE

REG	FOR	FISCAL YEAR	FISCAL QTR	UNCUT VOLUME UNDER CONTRACT	VOLUME SOLD	VALUE SOLD	VOLUME HARVESTED	VALUE HARVESTED	LOGGING COST	HAULING COST	HAUL DIST	VOLUME SOLD SUBJECT TO PRICE CHANGE: ESCALATION	RATE REDET	RATE REDET: OLD	RATE REDET: NEW	NO OF SALES
9	6	63	1	96300	1	-0	1	-0	-.00	-.00	-0	-0	-0	-.00	-.00	-0
9	6	63	2	-0	1	-0	1	-0	-.00	-.00	-0	-0	-0	-.00	-.00	-0
9	6	63	3	-0	1	-0	1	-0	-.00	-.00	-0	-0	-0	-.00	-.00	-0
9	6	63	4	-0	12885	60993	5825	32722	-.00	-.00	-0	-0	-0	-.00	-.00	-0
9	6	64	1	132200	1	-0	1	-0	19.57	10.09	-0	0	0	.00	.00	1
9	6	64	2	-0	1	-0	1	-0	20.16	6.14	-0	0	0	.00	.00	9
9	6	64	3	-0	1	-0	1	-0	19.99	4.77	9	0	0	.00	.00	14
9	6	64	4	-0	22165	87387	3206	17896	19.93	4.91	11	0	0	.00	.00	11
9	6	65	1	109200	1	-0	1	-0	.00	.00	0	0	0	.00	.00	0
9	6	65	2	-0	1	-0	1	-0	19.71	5.15	10	0	0	.00	.00	7
9	6	65	3	-0	1	-0	1	-0	18.23	6.54	11	0	0	.00	.00	13
9	6	65	4	-0	13409	86131	4929	31057	18.74	6.06	7	0	0	.00	.00	9
9	6	66	1	130250	1821	12097	5968	41123	19.26	6.24	11	0	0	.00	.00	2
9	6	66	2	-0	6788	75321	10985	76012	17.25	6.89	10	0	0	.00	.00	5
9	6	66	3	-0	15414	106605	10263	107532	18.53	6.60	7	0	0	.00	.00	11
9	6	66	4	-0	8909	107353	5557	34593	18.56	6.24	11	0	0	.00	.00	11
9	6	67	1	127150	8567	54224	10454	71022	19.17	5.74	8	0	0	.00	.00	5
9	6	67	2	-0	6484	45334	10770	59311	16.22	11.14	9	0	0	.00	.00	6
9	6	67	3	-0	9517	88250	7541	66894	19.16	7.39	10	0	0	.00	.00	8
9	6	67	4	-0	11163	110283	4497	31752	17.51	6.99	12	0	0	.00	.00	11
9	6	68	1	133600	2441	32208	10142	59214	16.57	6.88	17	0	0	.00	.00	3
9	6	68	2	-0	5134	100107	9389	66039	18.55	8.54	20	0	0	.00	.00	5
9	6	68	3	-0	10273	166684	5749	47802	19.51	7.23	13	0	0	.00	.00	10
9	6	68	4	-0	19446	169392	5634	54776	17.96	6.88	15	0	0	.00	.00	19
9	6	69	1	154500	2856	18419	8139	87610	16.44	6.21	4	0	0	.00	.00	2
9	6	69	2	-0	10988	173102	4294	45347	17.96	10.27	18	0	0	.00	.00	10
9	6	69	3	-0	8108	149642	7637	82010	18.17	8.84	13	0	0	.00	.00	9
9	6	69	4	-0	26076	299472	6378	76927	18.46	8.55	12	0	0	.00	.00	24
9	6	70	1	161500	2349	14568	5791	94911	17.30	9.26	13	0	0	.00	.00	3
9	6	70	2	-0	8130	104159	7435	66789	18.60	8.59	16	0	0	.00	.00	10
9	6	70	3	-0	20017	275379	12206	116845	19.45	8.33	15	0	0	.00	.00	21
9	6	70	4	-0	10445	90997	10142	108893	20.48	8.53	13	0	0	.00	.00	9
9	6	71	1	173200	3047	28099	5742	41006	21.32	7.87	11	0	0	.00	.00	1
9	6	71	2	-0	19683	243643	12322	98712	20.07	6.01	10	0	0	.00	.00	17
9	6	71	3	-0	8918	106470	6042	64631	21.14	8.24	10	0	0	.00	.00	9
9	6	71	4	-0	11218	123083	6941	73831	21.23	8.42	9	0	0	.00	.00	8
9	6	72	1	143300	1070	11905	7082	81106	21.06	8.94	14	0	0	.00	.00	1
9	6	72	2	-0	13124	122418	7517	77340	20.22	8.36	11	0	0	.00	.00	10
9	6	72	3	-0	1	0	16374	192878	20.16	8.19	11	0	0	.00	.00	11
9	6	72	4	-0	14887	164585	9361	102695	19.48	9.48	17	0	0	.00	.00	12
9	6	73	1	150400	661	3989	6944	71650	15.42	9.10	12	0	0	.00	.00	1
9	6	73	2	-0	4060	82202	11595	119577	17.87	8.99	12	0	0	.00	.00	4
9	6	73	3	-0	11393	171452	11142	99070	18.19	8.73	14	0	0	.00	.00	9
9	6	73	4	-0	25616	400952	5629	49291	19.97	8.50	11	0	0	.00	.00	31
9	6	74	1	151250	1738	24813	4261	54302	17.47	9.53	12	0	0	.00	.00	3
9	6	74	2	-0	17599	280532	6861	67393	19.70	8.07	12	0	0	.00	.00	14
9	6	74	3	-0	15531	312843	18938	203188	19.21	8.87	21	0	0	.00	.00	8
9	6	74	4	-0	7225	159268	7561	75763	18.84	9.08	15	0	0	.00	.00	5

DATA FURNISHED BY THE REGIONAL OR FOREST OFFICES

REG	FOR	FISCAL YEAR	FISCAL QTR	TOTAL SIC 24 CAPACITY	TOTAL SIC 26 CAPACITY	TOTAL CAPACITY	MILL SITE INVENTORY
9	6	64	3	351.0	810.5	1161.5	.28
9	6	64	4	351.0	810.5	1161.5	.46
9	6	65	1	351.0	810.5	1161.5	.31
9	6	65	2	351.0	810.5	1161.5	.26
9	6	65	3	351.0	810.5	1161.5	.18
9	6	65	4	351.0	810.5	1161.5	.50
9	6	66	1	351.0	810.5	1161.5	.26
9	6	66	2	351.0	810.5	1161.5	.20
9	6	66	3	351.0	810.5	1161.5	.32
9	6	66	4	351.0	810.5	1161.5	.38
9	6	67	1	351.0	810.5	1161.5	.26
9	6	67	2	351.0	810.5	1161.5	.28
9	6	67	3	351.0	708.5	1059.5	.37
9	6	67	4	351.0	708.5	1059.5	.31
9	6	68	1	351.0	661.6	1012.6	.25
9	6	68	2	351.0	661.6	1012.6	.22
9	6	68	3	351.0	724.1	1075.1	.27
9	6	68	4	351.0	724.1	1075.1	.41
9	6	69	1	351.0	724.1	1075.1	.21
9	6	69	2	351.0	598.4	949.4	.32
9	6	69	3	351.0	598.4	949.4	.23
9	6	69	4	351.0	598.4	949.4	.36
9	6	70	1	351.0	598.4	949.4	.26
9	6	70	2	351.0	598.4	949.4	.33
9	6	70	3	351.0	618.0	969.0	.41
9	6	70	4	351.0	618.0	969.0	.20
9	6	71	1	351.0	618.0	969.0	.18
9	6	71	2	351.0	618.0	969.0	.32
9	6	71	3	351.0	618.0	969.0	.37
9	6	71	4	351.0	618.0	969.0	.29
9	6	72	1	351.0	618.0	969.0	.30
9	6	72	2	351.0	618.0	969.0	.28
9	6	72	3	351.0	618.0	969.0	.43
9	6	72	4	351.0	618.0	969.0	.24
9	6	73	1	351.0	618.0	969.0	.20
9	6	73	2	351.0	618.0	969.0	.28
9	6	73	3	351.0	618.0	969.0	.38
9	6	73	4	351.0	618.0	969.0	.25
9	6	74	1	351.0	618.0	969.0	.30
9	6	74	2	351.0	618.0	969.0	.27

DATA FURNISHED BY THE WASHINGTON OFFICE

REG	FOR	FISCAL YEAR	FISCAL QTR	UNCUT VOLUME UNDER CONTRACT	VOLUME SOLD	VALUE SOLD	VOLUME HARVESTED	VALUE HARVESTED	LOGGING COST	HAULING COST	HAUL DIST	VOLUME SOLD SUBJECT TO PRICE CHANGE: ESCALATION	RATE REDET	RATE REDET: OLD	RATE REDET: NEW	NO OF SALES
9	10	63	1	76600	1	-0	1	-0	-.00	-.00	-0	-0	-0	-.00	-.00	-0
9	10	63	2	-0	1	-0	1	-0	-.00	-.00	-0	-0	-0	-.00	-.00	-0
9	10	63	3	-0	1	-0	1	-0	-.00	-.00	-0	-0	-0	-.00	-.00	-0
9	10	63	4	-0	16865	100934	10030	68918	-.00	-.00	-0	-0	-0	-.00	-.00	-0
9	10	64	1	101850	1	-0	1	-0	18.17	7.22	-0	0	0	.00	.00	1
9	10	64	2	-0	1	-0	1	-0	19.36	7.23	-0	0	0	.00	.00	5
9	10	64	3	-0	1	-0	1	-0	19.17	9.03	38	0	0	.00	.00	4
9	10	64	4	-0	16866	96551	6811	47448	19.51	8.18	30	0	0	.00	.00	11
9	10	65	1	88700	1	-0	1	-0	.00	.00	0	0	0	.00	.00	0
9	10	65	2	-0	1	-0	1	-0	19.54	9.96	31	0	0	.00	.00	6
9	10	65	3	-0	1	-0	1	-0	18.93	11.31	45	0	0	.00	.00	6
9	10	65	4	-0	16599	103912	10194	65339	18.69	8.00	25	0	0	.00	.00	6
9	10	66	1	95300	460	4853	4657	34610	16.50	6.00	10	0	0	.00	.00	1
9	10	66	2	-0	4210	45265	5137	36149	17.80	9.46	36	0	0	.00	.00	5
9	10	66	3	-0	7385	63090	4762	38495	15.92	10.29	22	0	0	.00	.00	6
9	10	66	4	-0	8420	54701	3406	26112	18.16	8.66	26	0	0	.00	.00	11
9	10	67	1	97750	1088	8494	5000	40607	17.38	8.18	15	0	0	.00	.00	2
9	10	67	2	-0	3598	25767	5328	40813	20.12	8.06	10	0	0	.00	.00	4
9	10	67	3	-0	8594	45683	5638	46419	19.22	6.72	8	0	0	.00	.00	6
9	10	67	4	-0	3955	31798	2758	26457	20.06	7.26	24	0	0	.00	.00	5
9	10	68	1	95200	2090	16312	5394	31830	19.58	8.80	25	0	0	.00	.00	3
9	10	68	2	-0	2636	44338	3110	21602	16.28	7.96	13	0	0	.00	.00	5
9	10	68	3	-0	2178	25750	5405	51584	23.26	8.96	12	0	0	.00	.00	3
9	10	68	4	-0	3668	33592	1089	22802	21.12	8.14	12	0	0	.00	.00	3
9	10	69	1	79800	3163	16107	2469	20010	22.78	9.16	10	0	0	.00	.00	4
9	10	69	2	-0	2922	31869	3355	36919	20.35	8.35	13	0	0	.00	.00	8
9	10	69	3	-0	7168	73473	4137	36938	17.32	8.60	9	0	0	.00	.00	8
9	10	69	4	-0	5394	59094	2932	35828	21.20	7.79	9	0	0	.00	.00	6
9	10	70	1	89450	3717	55385	4325	45472	20.29	9.51	12	0	0	.00	.00	6
9	10	70	2	-0	5754	116462	3129	35115	19.36	9.51	16	0	0	.00	.00	12
9	10	70	3	-0	4056	76417	3748	50865	20.89	8.05	15	0	0	.00	.00	9
9	10	70	4	-0	9069	147465	3183	44525	20.24	8.71	15	0	0	.00	.00	11
9	10	71	1	115100	14677	45880	3442	39399	18.19	7.87	13	0	0	.00	.00	3
9	10	71	2	-0	9357	134348	4502	61541	20.92	8.03	11	0	0	.00	.00	15
9	10	71	3	-0	5881	76750	1117	13415	20.65	7.62	11	0	0	.00	.00	9
9	10	71	4	-0	8188	83497	5062	91912	22.42	7.98	11	0	0	.00	.00	9
9	10	72	1	95500	1459	19074	3601	51060	21.13	8.41	15	0	0	.00	.00	4
9	10	72	2	-0	15488	117751	5222	82876	20.68	7.47	11	0	0	.00	.00	15
9	10	72	3	-0	1	0	2756	45014	20.17	8.69	15	0	0	.00	.00	10
9	10	72	4	-0	12945	76338	9780	132771	21.11	7.42	8	0	0	.00	.00	7
9	10	73	1	113850	2245	9650	5681	65082	21.66	8.40	14	0	0	.00	.00	3
9	10	73	2	-0	7591	121157	4972	55776	19.66	9.21	11	0	0	.00	.00	10
9	10	73	3	-0	8435	99538	4587	54702	19.71	7.90	8	0	0	.00	.00	8
9	10	73	4	-0	29722	220178	9806	107968	19.09	9.17	23	0	0	.00	.00	23
9	10	74	1	137300	7637	24042	4677	39096	.00	.00	0	0	0	.00	.00	4
9	10	74	2	-0	20312	294713	6818	71464	16.24	11.92	31	0	0	.00	.00	12
9	10	74	3	-0	18948	200123	4146	43206	19.99	13.66	33	0	0	.00	.00	12
9	10	74	4	-0	5423	62827	3329	42963	19.31	13.92	30	0	0	.00	.00	4

DATA FURNISHED BY THE REGIONAL OR FOREST OFFICES

REG	FOR	FISCAL YEAR	FISCAL QTR	TOTAL SIC 24 CAPACITY	TOTAL SIC 26 CAPACITY	TOTAL CAPACITY	MILL SITE INVENTORY
9	10	64	3	.0	.0	.0	-.00
9	10	64	4	.0	.0	.0	-.00
9	10	65	1	.0	.0	.0	-.00
9	10	65	2	.0	.0	.0	-.00
9	10	65	3	.0	.0	.0	-.00
9	10	65	4	.0	.0	.0	-.00
9	10	66	1	.0	.0	.0	-.00
9	10	66	2	.0	.0	.0	-.00
9	10	66	3	.0	.0	.0	-.00
9	10	66	4	.0	.0	.0	-.00
9	10	67	1	.0	.0	.0	-.00
9	10	67	2	.0	.0	.0	-.00
9	10	67	3	.0	.0	.0	-.00
9	10	67	4	.0	.0	.0	-.00
9	10	68	1	.0	.0	.0	-.00
9	10	68	2	.0	.0	.0	-.00
9	10	68	3	.0	.0	.0	-.00
9	10	68	4	.0	.0	.0	-.00
9	10	69	1	.0	.0	.0	-.00
9	10	69	2	.0	.0	.0	-.00
9	10	69	3	.0	.0	.0	-.00
9	10	69	4	.0	.0	.0	-.00
9	10	70	1	.0	.0	.0	-.00
9	10	70	2	.0	.0	.0	-.00
9	10	70	3	.0	.0	.0	-.00
9	10	70	4	.0	.0	.0	-.00
9	10	71	1	.0	.0	.0	-.00
9	10	71	2	.0	.0	.0	-.00
9	10	71	3	.0	.0	.0	-.00
9	10	71	4	.0	.0	.0	-.00
9	10	72	1	.0	.0	.0	-.00
9	10	72	2	.0	.0	.0	-.00
9	10	72	3	.0	.0	.0	-.00
9	10	72	4	.0	.0	.0	-.00
9	10	73	1	.0	.0	.0	-.00
9	10	73	2	.0	.0	.0	-.00
9	10	73	3	.0	.0	.0	-.00
9	10	73	4	.0	.0	.0	-.00
9	10	74	1	.0	.0	.0	-.00
9	10	74	2	.0	.0	.0	-.00

Appendix IIB: Economic Data

DATA FURNISHED BY THE UNIVERSITY OF WASHINGTON

FISCAL			HOUSING STARTS		PRICE INDICES						
YR	QTR	AAA CORPORATE INTEREST RATE	MONTHLY TOTAL	SEASONALLY ADJUSTED	DOUGLAS FIR LUMBER	SOFTWOOD PLYWOOD	PULP PAPER AND ALLIED PRODUCTS	INDUSTRIAL MATERIALS	HEMLOCK DOUG FIR LUMBER PRICE	AVERAGE GROSS WEEKLY EARNINGS	GROSS NATIONAL PRODUCT
64	3	4.37	111.73	167.93	98.93	106.40	96.05	98.60	68.00	100.95	616.8
64	4	4.41	156.93	155.70	100.47	108.73	95.24	101.60	70.00	102.97	627.7
65	1	4.41	136.63	146.40	98.50	104.70	95.12	105.50	66.33	103.55	637.9
65	2	4.43	116.67	156.87	96.00	102.13	95.36	112.60	62.00	103.55	644.2
65	3	4.42	99.47	147.10	99.77	107.60	95.57	111.50	68.67	106.14	660.8
65	4	4.44	159.77	154.47	97.33	103.53	96.30	116.30	65.33	106.95	672.9
66	1	4.50	135.93	149.10	97.73	107.13	96.30	114.90	69.33	107.10	686.5
66	2	4.61	119.07	157.57	96.23	104.60	97.07	115.90	66.00	109.89	704.4
66	3	4.81	99.73	151.80	99.13	110.70	97.75	122.30	73.33	110.41	721.2
66	4	5.00	139.73	136.83	108.40	118.53	98.94	119.40	78.67	112.01	732.3
67	1	5.32	102.43	109.00	102.97	100.97	99.43	113.20	68.00	112.20	745.3
67	2	5.38	75.37	98.30	99.17	95.13	99.29	106.00	63.00	114.17	759.1
67	3	5.12	72.60	111.80	101.83	96.90	99.58	104.60	67.33	112.58	774.2
67	4	5.26	127.23	120.77	103.93	96.40	100.13	99.80	72.67	113.62	783.5
68	1	5.62	127.37	140.70	108.20	105.53	100.29	98.10	77.67	115.00	800.4
68	2	6.03	113.43	144.53	109.50	101.50	100.78	99.00	78.33	117.79	816.1
68	3	6.13	99.50	150.13	117.13	110.53	101.55	98.50	89.00	119.05	835.3
68	4	6.25	154.07	144.00	123.50	116.83	101.31	96.70	94.67	121.27	858.7
69	1	6.08	141.10	154.70	131.83	129.47	101.16	95.10	100.00	123.15	876.4
69	2	6.24	124.20	160.33	136.57	159.80	101.35	99.50	104.00	126.38	892.5
69	3	6.70	112.07	171.60	157.73	211.77	102.90	105.50	131.33	126.08	908.7
69	4	6.89	156.13	151.37	152.77	125.50	104.13	110.40	102.00	128.75	924.8
70	1	7.06	129.00	143.23	124.07	109.90	104.63	114.90	75.67	130.55	942.8
70	2	7.47	102.63	139.80	123.20	113.07	105.27	116.10	75.33	133.18	953.1
70	3	7.69	88.60	125.23	116.60	109.23	107.57	119.50	73.33	131.76	956.0
70	4	8.14	139.63	128.63	116.00	115.13	108.23	117.30	75.00	133.04	968.5
71	1	8.22	136.13	151.23	115.20	116.87	108.30	111.80	78.33	134.67	983.5
71	2	7.91	132.60	177.67	113.10	110.63	108.70	106.70	75.67	135.48	988.4
71	3	7.22	129.57	184.73	121.87	122.63	109.20	107.40	88.00	139.43	1020.6
71	4	7.47	201.30	200.17	136.87	121.57	109.90	108.60	95.33	141.63	1040.0
72	1	7.56	192.83	211.30	149.27	132.57	110.57	106.50	110.33	142.88	1053.4
72	2	7.30	171.13	224.10	142.47	131.90	110.63	107.50	101.33	145.05	1073.0
72	3	7.23	176.10	251.27	151.07	145.73	111.57	114.10	115.00	149.78	1115.0
72	4	7.26	222.43	226.30	158.73	155.60	113.17	123.00	117.33	153.33	1143.0
73	1	7.21	214.30	236.70	166.50	160.77	114.03	124.90	135.33	155.62	1169.3
73	2	7.14	186.60	240.67	168.10	157.43	114.93	132.10	149.00	158.86	1204.7
73	3	7.22	162.63	239.27	188.77	197.40	116.87	146.00	175.67	162.12	1248.9
73	4	7.31	214.33	221.17	217.03	228.10	120.83	164.40	172.67	164.29	1277.9
74	1	7.59	184.00	200.67	217.53	159.03	123.33	185.50	161.67	166.87	1308.9
74	2	7.65	124.90	158.40	215.13	191.60	127.37	197.30	146.67	169.44	1344.0
74	3	7.90	107.67	162.83	217.47	191.43	133.97	229.30	151.00	170.21	1356.8
74	4	8.36	153.43	156.57	231.90	214.03	146.17	231.70	151.67	172.39	1383.8

Appendix III: Paired T-Tests of Independent Variable by Region

HN: $\mu_1 = \mu_2$

PAIRED T-TESTS OF VARIABLES
(REGION 1)

Variables	Bitterroot-Flathead	Bitterroot-Kootenai	Bitterroot-Lolo	Flathead-Kootenai	Flathead-Lolo	Kootenai-Lolo
VOLHARV	- 8.53**	-11.27**	-11.22**	- 8.14**	.04	4.61**
VOLHA4	- 9.31**	-12.91**	-16.50**	- 8.65**	- .57	4.27**
VOLHA8	- 9.19**	-12.83**	-15.52**	- 8.57**	- .75	3.20**
VOLSOLD	- 5.92**	- 6.00**	- 4.32**	- 1.72	- .28	1.36
VOLS04	- 5.96**	- 5.84**	- 4.59**	- 1.74	- .68	1.02
VOLS08	- 6.10**	- 5.99**	- 4.95**	- 1.84	- 1.07	.77
VALHARV	- 7.41**	- 7.84**	- 8.92**	- 3.19**	- 1.28	1.35
AVH	.02	.48	- 1.16	- 1.22	- 1.11	- 1.22
VALSOLD	- 5.01**	- 4.89	- 3.91**	- .40	.98	2.15*
AVS	- .52	.32	.08	2.03*	1.59	- .87
ESCVOL	- 4.77**	- 5.58**	- 5.07**	- 2.08*	- .22	2.07*
ESCVOL4	- 4.86**	- 5.26**	- 5.29**	- 1.79	- .36	1.64
ESCVOL8	- 4.35**	- 4.69**	- 4.86**	- 1.63	- .56	1.31
RRVOL	- 4.07**	- 5.38**	- 7.20**	- 2.51*	- 4.22**	- 2.16*
RRVOL4	- 4.12**	- 5.28**	- 6.81**	- 2.39*	- 3.91**	- 2.03*
RRVOL8	- 3.70**	- 4.82**	- 6.03**	- 2.08*	- 3.60**	- 2.10*
RATIO	- 1.33	- 2.42*	- 4.55**	- 1.58	- 3.48**	- 1.70
RATI04	- 1.04	- 2.02	- 3.92**	- 1.59	- 3.51**	- 2.26*
RATI08	- .65	- 2.03*	- 4.03**	- 1.95	- 4.02**	- 2.25*
DEPSTU	a/	a/	a/	a/	a/	a/
DEPOTH	a/	a/	a/	a/	a/	a/
NVEN	a/	a/	a/	a/	a/	a/
TCAPAC	-46.71**	-49.71**	-68.96**	6.64**	-24.49**	-28.15**
TCAP24	-32.62**	-33.86**	-65.12**	-21.15**	-48.71**	-24.45**
TCAP26	b/	b/	b/	-23.33**	10.72**	-33.13**
UVOLUC	-26.84**	-39.90**	-35.18**	-42.27**	- 5.75**	6.99**
LOGCO	- 2.25*	- 2.56*	- 3.01**	- 1.31	- 1.31	- .58
HAULDI	- 6.87**	- 3.40**	- 1.22	1.66	5.68**	2.70*

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d.f. = 39

tc = 2.704 @ 1%
= 2.021 @ 5%

a/ Data was not available

b/ Data for one of the forests was either zero or constant.

* Means that the null hypothesis was rejected at 5% and
** Means rejection at 1%

HN: $\mu_1 = \mu_2$

PAIRED T-TESTS OF VARIABLES
(REGION 2)

Variables	Medicine Bow -Rio Grande	Medicine Bow -Routt	Medicine Bow -San Juan	Rio Grande -Routt	Rio Grande -San Juan	Routt- San Juan
VOLHARV	2.76**	- .69	-10.03**	- 3.04**	-13.96**	-10.67**
VOLHA4	3.45**	- .75	- 8.79**	- 3.90**	-13.49**	- 9.57**
VOLHA8	3.78**	- 1.23	- 8.70**	- 4.36**	-13.89**	- 9.05**
VOLSOLD	- .14	- 1.10	- 3.38**	- .86	- 2.68*	- 2.05*
VOLSO4	- .43	- .78	- 2.95**	- .29	- 2.20*	- 2.39*
VOLSO8	.38	- .08	- 2.37*	- .50	- 2.42*	- 2.33*
VALHARV	- .61	1.94	- 7.21**	2.00	- 7.79**	- 7.25**
AVH	- 1.06	2.17*	- .71	2.77**	.72	- 4.26**
VALSOLD	- 1.13	.39	- 2.42*	.87	- .52	- 2.12*
AVS	- .52	.39	- .95	.79	- .39	- 1.11
ESCVOL	- .37	- 1.19	- 2.80**	- .87	- 2.14*	- 1.37
ESCVOL4	- 1.05	- 1.65	- 2.99**	- .94	- 2.02	- 1.27
ESCVOL8	- 1.19	- 1.83	- 2.61*	- 1.03	- 1.58	- .71
RRVOL	- .23	.37	- 2.56*	.79	- 2.86**	- 2.97**
RRVOL4	- .61	- .01	- 2.97**	.67	- 3.07**	- 3.11**
RRVOL8	- .69	- .26	- 3.04**	.46	- 3.09**	- 2.99**
RATIO	- 1.76	- 1.39	- 3.75**	.14	.21	.02
RATIO8	- 1.69	- 1.45	- 4.30**	- .53	- .86	.08
DEPSTU	4.44**	19.12**	b/	3.10**	b/	b/
DEPOTH	- 4.05**	-12.16**	- 2.08*	-10.74**	2.81**	11.89**
INVEN	6.09**	- 6.01**	- 6.65**	- 9.46**	- 7.50**	- .19
TCAPAC	-46.75**	b/	b/	b/	b/	b/
TCAP24	-46.75**	b/	b/	b/	b/	b/
TCAP26	b/	b/	b/	b/	b/	b/
UVOLUC	11.51**	9.35**	-10.75**	3.26**	-12.62**	-12.12**
LOGCO	.96	- .28	- 1.86	- 1.18	- 2.61*	- 1.65
HAULDI	- .23	- 1.61	- 2.39*	- .92	- 1.74	- .87
RATIO4	- 1.62	- 1.36	- 3.77**	- .50	- .81	.06

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d.f. - 39

tc = 2.704 @ 1%
= 2.021 @ 5%

a/ Data was not available.

b/ Data for one of the forests was either zero or constant.

* Means that the null hypothesis was rejected at 5% and
** Means rejection at 1%.

HN: $\mu_1 = \mu_2$

PAIRED T-TESTS OF VARIABLES
(REGION 5)

Variables	Eldorado-Sierra	Eldorado-Stanislaus	Eldorado-Tahoe	Sierra-Stanislaus	Sierra-Tahoe	Stanislaus-Tahoe
VOLHARV	- .58	- 1.42	- .03	- 1.07	1.02	1.68
VOLHA4	- 1.10	- 2.69*	- .34	- 2.10*	1.16	2.75**
VOLHA8	- 1.47	- 2.21*	- .67	- .95	1.15	1.61
VOLSOLD	- .22	- .36	.09	- .22	.37	.48
VOLS04	- .21	.15	- .04	- .35	.23	- .22
VOLS08	- .31	.14	.16	- .39	.53	.00
VALHARV	4.32**	1.54	1.63	- 3.82**	- 5.67**	- .04
AVH	9.07**	1.66	3.35**	- 3.71**	- 8.14**	.02
VALSOLD	2.27*	.15	.95	- 2.07*	- 2.83**	.66
AVS	4.84**	1.83	.14	- 3.09**	- 5.51**	- .96
ESCVOL	- .29	- .82	.14	- .69	.60	1.03
ESCVOL4	- .65	- .38	- .26	.31	.59	.16
ESCVOL8	- .64	- .27	- .12	.41	.69	.14
RRVOL	- 2.11*	- 1.57	- 2.14*	1.46	.23	- 1.46
RRVOL4	- 2.11*	- 1.41	- 2.14*	1.57	.23	- 1.59
RRVOL8	b/	b/	b/	1.57	.50	- 1.48
RATIO	- .76	- .36	- .64	.98	.48	- .61
RATI04	- .55	- .15	- .64	1.23	- .25	- 1.21
RATI08	b/	b/	b/	1.23	.85	- .79
DEPSTU	a/	a/	a/	a/	a/	a/
DEPOTH	a/	a/	a/	a/	a/	a/
INVEN	a/	a/	a/	a/	a/	a/
TCAPAC	a/	a/	a/	a/	a/	a/
TCAP24	a/	a/	a/	a/	a/	a/
TCAP26	a/	a/	a/	a/	a/	a/
UVOLUC	- 8.58**	3.26**	-13.19**	11.76**	- 6.48**	-12.24**
LOGCO	2.34*	1.90	.07	- .84	- 2.50*	- 1.85
HAULDI	3.59**	.53	3.03**	- 3.15**	- .69	2.65*

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d.f. = 39

tc = 2.704 @ 1%
= 2.021 @ 5%

a/ Data was not available.

b/ Data for one of the forests was either zero or constant.

* Means that the null hypothesis was rejected at 5% and
** Means rejection at 1%.

HN: $\mu_1 = \mu_2$

PAIRED T-TESTS OF VARIABLES
(REGION 6)

Variables	Pinchot-Mt. Baker	Pinchot-Mt. Hood	Pinchot-Umpqua	Mt. Baker-Mt. Hood	Mt. Baker-Umpqua	Mt. Hood-Upmqua
VOLHARV	13.62**	8.39**	4.12**	-11.09**	-14.07**	- 2.27*
VOLHA4	13.36**	8.76**	4.16**	-10.60**	-13.59**	- 2.38*
VOLHA8	13.11**	9.42**	4.14**	-10.16**	-13.65**	- 2.59*
VOLSOLD	8.43**	.93	.37	- 4.34**	- 7.65**	- .54
VOLS04	8.01**	.91	.28	- 4.08**	- 7.33**	- .56
VOLS08	6.65**	.93	.25	- 4.02**	- 7.12**	- .57
VALHARV	11.26**	5.15**	4.48**	-11.17**	-12.04**	2.14*
AVH	9.48**	- 2.17*	3.52**	-17.19**	- 5.97**	6.64**
VALSOLD	7.07**	1.72	1.77	- 5.39**	- 6.81**	.03
AVS	7.25**	1.53	2.40*	- 5.20**	- 2.92**	1.33
ESCVOL	2.43*	1.14	.53	- 2.66*	- 2.75**	1.27
ESCVOL4	2.72**	1.00	.81	- 2.72**	- 2.88**	1.34
ESCVOL8	2.72**	- .88	.81	- 2.63*	- 2.88**	1.23
RRVOL	2.93**	3.37**	3.56**	1.35	- 2.87**	2.46*
RRVOL4	3.20**	3.58**	3.70**	.93	2.32*	2.29*
RRVOL8	2.99**	3.33**	3.43**	.83	2.13*	2.14*
RATIO	1.97	- .28	1.65	- 1.19	- .35	.99
RATI04	2.17*	1.70	1.34	- .47	- .76	- .30
RATI08	2.27*	2.35*	.87	- .47	- 1.57	- 1.13
EPSTU	21.47**	-10.30**	- .13	-60.76**	-37.37**	15.15**
EPOTH	-20.17**	- 7.73**	18.28**	- 1.57	50.54**	13.45**
INVEN	a/	a/	a/	a/	a/	a/
TCAPAC	61.65**	30.37**	21.15**	- 8.87**	.39	7.65**
TCAP24	4.28**	- 9.83**	- .07	-12.53**	- 1.38	7.65**
TCAP26	b/	b/	b/	b/	b/	b/
UVOLUC	47.84**	10.33**	17.35**	-19.07**	-18.13**	7.86**
LOGCO	- 2.49*	- 2.70*	- 2.19*	- .45	.60	.97
HAULDI	1.93	-12.15**	-15.33**	-10.93**	-15.30**	- 4.52**

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d.f. = 39

tc = 2.704 @ 1%
= 2.021 @ 5%

a/ Data was not available.

b/ Data for one of the forests was either zero or constant.

* Means that the null hypothesis was rejected at 5% and
* Means rejection at 1%.

HN: $\mu_1 = \mu_2$

PAIRED T-TESTS OF VARIABLES
(REGION 8)

Variables	Kistachie-Ouachita	Kistachie-Ozark	Kistachie-Texas	Ouachita-Ozark	Ouachita-Texas	Ozark-Texas
VOLHARV	-4.46**	8.56**	1.40	13.69**	6.45**	- 9.40**
VOLHA4	-5.51**	8.03**	.00	14.55**	6.53**	-10.96**
VOLHA8	-5.72**	8.08**	-1.11	14.45**	6.77**	-11.96**
VOLSOLD	-4.07**	9.57**	2.28*	10.33**	4.87**	- 7.58**
VOLS04	-4.63**	9.60**	.99	10.97**	4.38**	- 8.30**
VOLS08	-5.37**	8.64**	.32	11.41**	4.74**	-8.55**
VALHARV	-1.55	6.19**	.84	17.52**	4.38**	-9.16**
AVH	- .31	4.45**	-5.32**	3.56**	-2.75**	-6.89**
VALSOLD	.14	6.53**	1.63	10.11**	1.87	-5.90**
AVS	1.77	5.40**	-2.65*	2.96**	-3.87**	-6.91**
ESCVOL	b/	b/	b/	b/	b/	b/
ESCVOL4	b/	b/	b/	b/	b/	b/
ESCVOL8	b/	b/	b/	b/	b/	b/
RRVOL	b/	b/	b/	b/	b/	b/
RRVOL4	b/	b/	b/	b/	b/	b/
RRVOL8	b/	b/	b/	b/	b/	b/
RATIO	b/	b/	b/	b/	b/	b/
RATI04	b/	b/	b/	b/	b/	b/
RATI08	b/	b/	b/	b/	b/	b/
EPSTU	a/	a/	a/	a/	a/	a/
EPOTH	a/	a/	a/	a/	a/	a/
INVEN	a/	a/	a/	a/	a/	a/
TCAPAC	a/	a/	a/	a/	a/	a/
TCAP24	a/	a/	a/	a/	a/	a/
TCAP26	a/	a/	a/	a/	a/	a/
UVOLUC	-3.80**	13.36**	3.68**	7.34**	5.49**	-21.89**
LOGCO	1.86	-1.03	-1.58	-1.80	3.40**	3.60**
HAULDI	1.01	-2.21*	-4.46**	-3.84**	-2.58*	1.08

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d.f. = 39

tc = 2.704 @ 1%
= 2.021 @ 5%

a/ Data was not available.

b/ Data for one of the forests was either zero or constant.

* Means that the null hypothesis was rejected at 5% and
** Means rejection at 1%.

HN: $\mu_1 = \mu_2$

PAIRED T-TESTS OF VARIABLES
(REGION 9)

Variables	Chippewa-Huron-Manistee	Chippewa-Nicolet	Huron-Manistee-Nicolet	Chippewa-Hiawatha	Huron-Manistee-Hiawatha	Nicolet-Hiawatha
VOLHARV	- 6.74**	- 2.70*	5.52**	3.88**	9.12**	5.56**
VOLHA4	- 6.23**	- 2.50*	5.01**	3.34**	7.97**	5.03**
VOLHA8	- 5.97**	- 2.01	5.04**	3.19**	7.51**	4.46**
VOLSOLD	- 1.55	- .02	2.00	1.51	2.91**	2.33*
VOLSO4	- 1.67	- .24	1.98	1.61	3.10**	2.84**
VOLSO8	- 1.51	- .13	1.89	1.82	3.06**	2.94**
VALHARV	- .82	- 4.09**	- 2.84**	1.18	2.58*	4.24**
AVH	9.41**	- 2.42*	-11.25**	-4.12**	-12.08**	-2.87**
VALSOLD	1.48	- 3.78**	- 4.18**	1.19	- .41	4.25**
AVS	4.66**	- 2.20*	- 8.38**	- .46	- 5.89**	2.10*
ESCVOL	b/	b/	b/	b/	b/	b/
ESCVOL4	b/	b/	b/	b/	b/	b/
ESCVOL8	b/	b/	b/	b/	b/	b/
RRVOL	b/	b/	b/	b/	b/	b/
RRVOL4	b/	b/	b/	b/	b/	b/
RRVOL8	b/	b/	b/	b/	b/	b/
RATIO	b/	b/	b/	b/	b/	b/
RATIO4	b/	b/	b/	b/	b/	b/
RATIO8	b/	b/	b/	b/	b/	b/
DEPSTU	-35.33**	-77.82**	-70.41**	a/	a/	a/
EPOTH	b/	b/	b/	a/	a/	a/
NVEN	b/	9.20**	b/	a/	a/	a/
TCAPAC	138.83**	11.28**	-48.08**	a/	a/	a/
TCAP24	b/	b/	b/	a/	a/	a/
TCAP26	181.99**	15.92**	-25.94**	a/	a/	a/
UVOLUC	.52	4.58**	35.18**	8.62**	34.38**	13.90**
LOGCO	.42	- 1.53	- 2.22*	-1.74	- 2.09*	- .64
HAULDI	- 8.74**	3.17**	9.97**	- .25	7.70**	-2.90**

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d.f. = 39

tc = 2.704 @ 1%
= 2.021 @ 5%

a/ Data was not available.

b/ Data for one of the forests was either zero or constant.

* Means that the null hypothesis was rejected at 5% and
** Means rejection at 1%.

Appendix IV: Dependency on Study Forests

Appendix Table

SUMMARY OF DEPENDENCY ON STUDY FOREST FOR TIMBER

REGION 1 CALENDAR YEAR	QTR	FOREST 03 Bitterroot [a/]	FOREST 10 Flathead [a/]	FOREST 14 Kootenai [a/]	FOREST 16 Lolo [a/]
1964	1				
	2				
	3				
	4				
1965	1				
	2				
	3				
	4				
1966	1				
	2				
	3				
	4				
1967	1				
	2				
	3				
	4				
1968	1				
	2				
	3				
	4				
1969	1				
	2				
	3				
	4				
1970	1				
	2				
	3				
	4				
1971	1				
	2				
	3				
	4				
1972	1				
	2				
	3				
	4				
1973	1	75	80	65	50
	2				
	3				
	4				

[a/] Only one estimate submitted

SUMMARY OF DEPENDENCY ON STUDY FOREST FOR TIMBER

REGION 2	CALENDAR YEAR	QTR	FOREST 06 Medicine Bow b/	FOREST 09 Rio Grande b/	FOREST 11 Routt	FOREST 13 San Juan b/
	1964	1	100	100	95	90
		2			95	
		3			95	
		4			95	
	1965	1	100	100	95	90
		2			95	
		3			95	
		4			95	
	1966	1	100	100	95	90
		2			95	
		3			95	
		4			95	
	1967	1	100	100	95	90
		2			95	
		3			92	
		4			92	
	1968	1	100	100	92	90
		2			92	
		3			92	
		4			92	
	1969	1	100	100	92	90
		2			92	
		3			92	
		4			92	
	1970	1	100	100	92	90
		2			92	
		3			91	
		4			91	
	1971	1	95	86	91	90
		2			91	
		3			91	
		4			91	
	1972	1	100	85	91	90
		2			91	
		3			89	
		4			89	
	1973	1	100	85	89	90
		2			89	
		3			89	
		4			89	

b/ Annual estimate

SUMMARY OF DEPENDENCY ON STUDY FOREST FOR TIMBER

REGION 5	CALENDAR YEAR	QTR	FOREST 03 Eldorado [c/]	FOREST 15 Sierra [c/]	FOREST 16 Stanislaus [c/]	FOREST 17 Tahoe [c/]
	1964	1				
		2				
		3				
		4				
	1965	1				
		2				
		3				
		4				
	1966	1				
		2				
		3				
		4				
	1967	1				
		2				
		3				
		4				
	1968	1				
		2				
		3				
		4				
	1969	1				
		2				
		3				
		4				
	1970	1				
		2				
		3				
		4				
	1971	1				
		2				
		3				
		4				
	1972	1				
		2				
		3				
		4				
	1973	1				
		2				
		3				
		4				

[c/] No estimates submitted

SUMMARY OF DEPENDENCY ON STUDY FOREST FOR TIMBER

REGION 6	CALENDAR YEAR	QTR	b/ FOREST 03 Pinchot	b/ FOREST 05 Mt. Baker	b/ FOREST 06 Mt. Hood	b/ FOREST 15 Umpqua
	1964	1		5	48	31
		2				
		3				
		4				
	1965	1	23	5	48	33
b/ Annual Estimates		2				
		3				
		4				
	1966	1		5	48	38
		2				
		3				
		4				
	1967	1		5	42	35
		2				
		3				
		4				
	1968	1	44	5	37	30
		2				
		3				
		4				
	1969	1		5	43	30
		2				
		3				
		4	29			
	1970	1		5	49	24
		2				
		3				
		4				
	1971	1		5	50	24
		2				
		3				
		4				
	1972	1	31	7	51	30
		2				
		3				
		4				
	1973	1		6	52	30
		2				
		3				
		4	34			

b/ Annual estimates

SUMMARY OF DEPENDENCY ON STUDY FOREST FOR TIMBER

REGION 8	CALENDAR YEAR	QTR	c/ FOREST 06 Kistachie	c/ FOREST 09 Ouachita	c/ FOREST 10 Ozark	c/ FOREST 13 Texas
	1964	1				
		2				
		3				
		4				
	1965	1				
		2				
		3				
		4				
	1966	1				
		2				
		3				
		4				
	1967	1				
		2				
		3				
		4				
	1968	1				
		2				
		3				
		4				
	1969	1				
		2				
		3				
		4				
	1970	1				
		2				
		3				
		4				
	1971	1				
		2				
		3				
		4				
	1972	1				
		2				
		3				
		4				
	1973	1				
		2				
		3				
		4				

c/ No estimates available

SUMMARY OF DEPENDENCY ON STUDY FOREST FOR TIMBER

REGION 9	CALENDAR YEAR	QTR	a/ FOREST 03 Chippewa	b/ FOREST 04 Huron-Manistee	FOREST 06 Nicolet	c/ FOREST 10 Hiawatha
	1964	1		23	85	
		2			83	
		3			91	
		4			87	
	1965	1		23	88	
		2			92	
		3			82	
		4			90	
	1966	1		23	82	
		2			89	
		3			94	
		4			79	
	1967	1		24	88	
		2			92	
		3			78	
		4			86	
	1968	1		24	89	
		2			93	
		3			88	
		4			88	
	1969	1		24	83	
		2			85	
		3			89	
		4			91	
	1970	1		24	82	
		2			86	
		3			88	
		4			89	
	1971	1		24	79	
		2			86	
		3			85	
		4			85	
	1972	1		25	84	
		2			88	
		3			89	
		4			92	
	1973	1	20	25	90	
		2			90	
		3			88	
		4			73	

a/ Only one estimate

b/ Annual estimates

c/ No estimate submitted

Appendix V: Residual Sum of Squares

Appendix Table : Residual sums of squares of the regression estimates of derived demand for National Forest timber of alternative proxy measures for value of UVOLUC

REGION	FOREST	TWAVH4	TWAVH8
1	3	55.237	55.355
	10	22.606	22.560
	14	17.843	17.926
	16	17.121	18.818
2	06	45.005	48.485
	09	60.837	61.426
	11	36.896	36.469
	13	26.843	27.047
5	03	26.131	26.683
	15	55.762	55.534
	16	59.286	61.072
	17	34.743	35.484
6	03	9.836	9.789
	05	10.571	9.732
	06	6.416	6.375
	15	11.589	11.150
8	06	8.584	8.761
	09	1.426	1.211
	10	15.896	15.972
	13	3.134	3.087
9	03	16.665	14.613
	04	12.850	12.923
	06	22.508	22.527
	10	16.803	16.830

DATA FURNISHED BY THE WASHINGTON OFFICE

REG	FOR	FISCAL YEAR	FISCAL QTR	UNCUT VOLUME UNDER CONTRACT	VOLUME SOLD	VALUE SOLD	VOLUME HARVESTED	VALUE HARVESTED	LOGGING COST	HAULING COST	HAUL DIST	VOLUME SOLD SUBJECT TO PRICE CHANGE: ESCALATION	VOLUME SOLD SUBJECT TO PRICE CHANGE: RATE REDET	RATE REDET PRICE CHANGE: OLD	RATE REDET PRICE CHANGE: NEW	NO OF SALES
2	13	63	1	458900	1	0	16032	95379	-.00	-.00	-0	-0	-0	-.00	-.00	-0
2	13	63	2	-0	106000	650600	11062	67937	-.00	-.00	-0	-0	-0	-.00	-.00	-0
2	13	63	3	-0	42010	192488	5922	45948	-.00	-.00	-0	-0	-0	-.00	-.00	-0
2	13	63	4	-0	130000	663780	12745	74856	-.00	-.00	-0	-0	-0	-.00	-.00	-0
2	13	64	1	469900	1142	3426	15659	85383	14.19	9.32	-0	0	0	.00	.00	1
2	13	64	2	-0	14572	29308	15565	74562	13.39	9.10	-0	0	0	.00	.00	2
2	13	64	3	-0	14370	32525	6275	19078	15.96	12.15	30	0	38709	3.40	3.40	1
2	13	64	4	-0	31522	57394	8551	34579	13.39	7.22	55	31522	0	.00	.00	3
2	13	65	1	458300	1	0	11175	47391	-.00	-.00	-0	0	0	.00	.00	0
2	13	65	2	-0	7991	14645	11513	33166	16.25	6.81	32	7997	23624	3.14	3.14	1
2	13	65	3	-0	12828	38484	2746	6268	-.00	-.00	-0	0	2033	5.80	5.80	0
2	13	65	4	-0	4319	24918	3742	49057	16.41	8.12	34	17147	0	.00	.00	2
2	13	66	1	433000	1	0	11474	57562	-.00	-.00	-0	0	23051	6.66	1.41	0
2	13	66	2	-0	1345	15938	20772	81294	13.65	7.25	16	0	12057	10.20	10.20	1
2	13	66	3	-0	16410	59630	15914	75049	13.51	6.62	33	2800	60174	5.20	5.20	3
2	13	66	4	-0	6450	41210	13299	114600	14.64	7.20	25	4500	0	.00	.00	2
2	13	67	1	414000	1	0	31435	234815	-.00	-.00	-0	0	53030	3.07	4.01	0
2	13	67	2	-0	1	0	22806	128022	.00	.00	0	0	0	.00	.00	0
2	13	67	3	-0	11800	34220	15707	40617	14.50	12.08	44	11800	10787	3.82	3.92	1
2	13	67	4	-0	30245	146410	11769	41251	14.75	9.42	41	2525	25729	1.81	4.92	5
2	13	68	1	359000	12360	66932	23646	150525	15.71	10.55	46	0	12628	3.00	3.00	2
2	13	68	2	-0	15130	140528	33586	221875	15.06	11.04	46	4700	51318	3.00	4.95	3
2	13	68	3	-0	9690	88832	19147	129531	13.28	8.63	24	9690	87104	5.51	5.51	2
2	13	68	4	-0	7700	43043	16297	178523	13.26	9.63	40	0	0	.00	.00	1
2	13	69	1	320900	10600	154316	34817	426279	14.06	9.38	36	10600	0	.00	.00	2
2	13	69	2	-0	12490	262255	30919	485357	15.86	9.24	27	11590	24763	4.10	30.07	4
2	13	69	3	-0	16230	34417	13492	253218	14.29	8.82	41	16230	45906	12.67	13.40	3
2	13	69	4	-0	15510	684256	16493	337261	12.69	7.74	24	15510	0	.00	.00	3
2	13	70	1	264300	4960	22888	24463	329203	16.96	7.07	21	3200	0	.00	.00	3
2	13	70	2	-0	3933	21450	19820	209425	16.77	8.12	22	333	24763	30.07	30.07	3
2	13	70	3	-0	5680	15994	13123	145078	17.43	9.87	31	280	113364	8.63	13.03	2
2	13	70	4	-0	19220	171837	11121	167582	18.44	4.51	12	19220	25729	8.66	11.98	4
2	13	71	1	216100	3770	9404	23676	270530	20.34	9.47	37	0	0	.00	.00	1
2	13	71	2	-0	2830	4867	24028	214354	18.72	5.20	15	3400	0	.00	.00	1
2	13	71	3	-0	7935	39610	16001	135814	19.14	6.41	21	7935	14870	13.47	13.47	3
2	13	71	4	-0	42050	122018	11014	226752	19.54	7.66	25	41770	0	.00	.00	7
2	13	72	1	187800	8790	17580	18661	400087	24.32	6.59	16	8790	0	.00	.00	1
2	13	72	2	-0	4250	24668	15368	237663	23.07	9.84	35	4250	130000	6.83	6.83	2
2	13	72	3	-0	23400	116852	15706	236981	20.85	8.42	29	23400	28270	13.09	13.09	4
2	13	72	4	-0	35510	307026	17268	353230	22.43	9.95	25	24960	25729	11.46	27.66	10
2	13	73	1	156300	2871	58068	21902	491146	31.37	11.13	40	1416	27228	37.69	37.69	5
2	13	73	2	-0	25495	615023	12437	138848	22.22	10.48	24	25200	0	.00	.00	6
2	13	73	3	-0	181	4599	12148	187551	18.16	11.60	32	0	0	.00	.00	1
2	13	73	4	-0	27065	645512	4973	122135	24.82	11.40	30	26420	0	.00	.00	9
2	13	74	1	141350	8850	108675	25018	845480	23.08	9.63	34	1450	0	.00	.00	2
2	13	74	2	-0	3630	46238	23564	587392	34.26	14.90	47	3630	0	.00	.00	3
2	13	74	3	-0	13845	369971	15504	483155	30.77	9.78	24	18015	12080	12.71	75.25	6
2	13	74	4	-0	1	0	12286	268120	-.00	-.00	-0	0	0	.00	.00	0

DATA FURNISHED BY THE REGIONAL OR FOREST OFFICES

REG	FOR	FISCAL YEAR	FISCAL QTR	TOTAL SIC 24 CAPACITY	TOTAL SIC 26 CAPACITY	TOTAL CAPACITY	MILL SITE INVENTORY
2	13	64	3	820.0	.0	820.0	2.70
2	13	64	4	820.0	.0	820.0	1.40
2	13	65	1	820.0	.0	820.0	.80
2	13	65	2	820.0	.0	820.0	3.20
2	13	65	3	820.0	.0	820.0	2.80
2	13	65	4	820.0	.0	820.0	1.50
2	13	66	1	820.0	.0	820.0	.80
2	13	66	2	820.0	.0	820.0	3.20
2	13	66	3	820.0	.0	820.0	2.69
2	13	66	4	820.0	.0	820.0	1.40
2	13	67	1	820.0	.0	820.0	.70
2	13	67	2	820.0	.0	820.0	2.80
2	13	67	3	820.0	.0	820.0	1.80
2	13	67	4	820.0	.0	820.0	1.20
2	13	68	1	820.0	.0	820.0	.60
2	13	68	2	820.0	.0	820.0	2.60
2	13	68	3	820.0	.0	820.0	2.20
2	13	68	4	820.0	.0	820.0	1.10
2	13	69	1	820.0	.0	820.0	.55
2	13	69	2	820.0	.0	820.0	2.10
2	13	69	3	820.0	.0	820.0	1.80
2	13	69	4	820.0	.0	820.0	.90
2	13	70	1	820.0	.0	820.0	.40
2	13	70	2	820.0	.0	820.0	2.00
2	13	70	3	820.0	.0	820.0	1.50
2	13	70	4	820.0	.0	820.0	.80
2	13	71	1	820.0	.0	820.0	.40
2	13	71	2	820.0	.0	820.0	1.80
2	13	71	3	820.0	.0	820.0	1.35
2	13	71	4	820.0	.0	820.0	.60
2	13	72	1	820.0	.0	820.0	.30
2	13	72	2	820.0	.0	820.0	1.10
2	13	72	3	820.0	.0	820.0	.90
2	13	72	4	820.0	.0	820.0	.50
2	13	73	1	820.0	.0	820.0	.20
2	13	73	2	820.0	.0	820.0	1.20
2	13	73	3	820.0	.0	820.0	.80
2	13	73	4	820.0	.0	820.0	.40
2	13	74	1	820.0	.0	820.0	.20
2	13	74	2	820.0	.0	820.0	1.20

DATA FURNISHED BY THE WASHINGTON OFFICE

REG	FOR	FISCAL YEAR	FISCAL QTR	UNCUT VOLUME UNDER CONTRACT	VOLUME SOLD	VALUE SOLD	VOLUME HARVESTED	VALUE HARVESTED	LOGGING COST	HAULING COST	HAUL DIST	VOLUME SOLD SUBJECT TO RATE REDET: ESCALATION	RATE REDET	PRICE CHANGE: OLD	PRICE CHANGE: NEW	NO OF SALES
5	3	63	1	151500	5898	104447	38837	562215	-.00	-.00	-0	-0	-0	-.00	-.00	-0
5	3	63	2	-0	24430	398780	17845	162935	-.00	-.00	-0	-0	-0	-.00	-.00	-0
5	3	63	3	-0	14866	314755	243	5715	-.00	-.00	-0	-0	-0	-.00	-.00	-0
5	3	63	4	-0	74692	1497076	19421	421937	-.00	-.00	-0	-0	-0	-.00	-.00	-0
5	3	64	1	207400	16587	191328	30973	443714	9.20	10.92	-0	0	0	.00	.00	4
5	3	64	2	-0	6802	88438	24023	414747	10.04	6.96	-0	0	0	.00	.00	5
5	3	64	3	-0	48700	749545	13944	125855	10.00	12.12	33	48700	0	.00	.00	2
5	3	64	4	-0	100350	1610131	17161	323178	10.08	13.27	36	98070	0	.00	.00	9
5	3	65	1	294200	5120	101150	55756	935034	11.51	8.41	23	3720	0	.00	.00	1
5	3	65	2	-0	14244	192451	33343	520904	11.00	9.67	21	4000	0	.00	.00	3
5	3	65	3	-0	2040	24549	7848	128011	10.22	9.78	30	9680	0	.00	.00	2
5	3	65	4	-0	120476	1359259	27995	583326	10.23	11.30	45	106900	0	.00	.00	6
5	3	66	1	265300	13840	258909	70451	1149239	10.22	11.13	32	11300	0	.00	.00	5
5	3	66	2	-0	562	10499	37609	554951	10.16	7.34	18	0	0	.00	.00	2
5	3	66	3	-0	7900	148870	7024	114537	10.16	5.98	9	7900	0	.00	.00	1
5	3	66	4	-0	88350	1062969	22082	505429	10.14	11.50	43	88350	0	.00	.00	9
5	3	67	1	253800	4495	60219	86664	1298270	10.41	13.88	42	0	0	.00	.00	7
5	3	67	2	-0	3140	40277	27739	279775	9.14	8.26	19	3140	0	.00	.00	2
5	3	67	3	-0	26770	624470	3943	70952	9.56	16.02	35	26770	0	.00	.00	3
5	3	67	4	-0	81300	1111915	8771	157133	9.29	10.85	31	81300	0	.00	.00	8
5	3	68	1	308100	1010	22792	71191	1025513	10.68	10.46	30	1010	0	.00	.00	2
5	3	68	2	-0	5470	92989	31514	520920	10.80	10.63	39	5470	0	.00	.00	2
5	3	68	3	-0	29069	687746	851	13502	10.60	11.93	53	28840	0	.00	.00	6
5	3	68	4	-0	104603	1911545	20875	532320	9.39	12.48	42	102900	0	.00	.00	11
5	3	69	1	332500	5191	128241	98470	1645384	9.40	10.72	39	3800	0	.00	.00	6
5	3	69	2	-0	11649	636263	21657	541608	11.30	10.38	26	10230	0	.00	.00	3
5	3	69	3	-0	1	0	4010	88370	-.00	-.00	-0	0	0	.00	.00	0
5	3	69	4	-0	131360	8929694	24307	1224805	9.10	12.30	41	131000	0	.00	.00	9
5	3	70	1	346500	1489	39484	63373	1490093	11.26	14.01	41	0	0	.00	.00	4
5	3	70	2	-0	655	9629	40324	1161551	9.80	15.75	43	0	0	.00	.00	2
5	3	70	3	-0	41700	2097226	2495	64198	9.01	17.90	57	41700	0	.00	.00	2
5	3	70	4	-0	105974	2279295	27052	969310	10.18	11.67	33	105473	0	.00	.00	12
5	3	71	1	259600	1	0	48558	1612112	-.00	-.00	-0	0	0	.00	.00	0
5	3	71	2	-0	63100	931726	21866	481202	10.73	12.94	39	63100	0	.00	.00	5
5	3	71	3	-0	14993	247619	14161	374064	11.32	9.94	26	10000	0	.00	.00	2
5	3	71	4	-0	49250	895287	27016	1163287	11.33	13.37	43	48700	0	.00	.00	5
5	3	72	1	289600	958	32174	67164	3418460	10.66	12.60	45	0	0	.00	.00	2
5	3	72	2	-0	26300	1085197	23866	863495	14.17	10.22	33	26300	0	.00	.00	2
5	3	72	3	-0	19700	1090432	19477	802564	12.73	11.71	18	19700	0	.00	.00	2
5	3	72	4	-0	71224	4163424	51640	2282530	13.09	12.86	34	71100	0	.00	.00	8
5	3	73	1	230000	2690	34424	46540	1478404	24.35	13.31	26	642	0	.00	.00	2
5	3	73	2	-0	54710	5235140	40868	1520858	12.87	14.05	42	54525	0	.00	.00	8
5	3	73	3	-0	21655	2208564	17713	776099	15.03	12.86	32	21655	0	.00	.00	3
5	3	73	4	-0	21896	2525626	35008	2673117	15.64	13.36	40	21896	3800	13.68	51.16	3
5	3	74	1	288200	34671	3833713	65644	3816680	12.69	13.95	42	34511	0	.00	.00	5
5	3	74	2	-0	9260	261941	17751	1146064	21.30	28.75	66	9260	0	.00	.00	3
5	3	74	3	-0	18870	536430	11483	341817	22.61	31.18	90	61612	0	.00	.00	1
5	3	74	4	-0	43432	1798099	48569	3626676	54.67	12.35	32	0	0	.00	.00	5

DATA FURNISHED BY THE REGIONAL OR FOREST OFFICES

REG	FOR	FISCAL YEAR	FISCAL QTR	TOTAL SIC 24 CAPACITY	TOTAL SIC 26 CAPACITY	TOTAL CAPACITY	MILL SITE INVENTORY
5	3	64	3	.0	.0	.0	-.00
5	3	64	4	.0	.0	.0	-.00
5	3	65	1	.0	.0	.0	-.00
5	3	65	2	.0	.0	.0	-.00
5	3	65	3	.0	.0	.0	-.00
5	3	65	4	.0	.0	.0	-.00
5	3	66	1	.0	.0	.0	-.00
5	3	66	2	.0	.0	.0	-.00
5	3	66	3	.0	.0	.0	-.00
5	3	66	4	.0	.0	.0	-.00
5	3	67	1	.0	.0	.0	-.00
5	3	67	2	.0	.0	.0	-.00
5	3	67	3	.0	.0	.0	-.00
5	3	67	4	.0	.0	.0	-.00
5	3	68	1	.0	.0	.0	-.00
5	3	68	2	.0	.0	.0	-.00
5	3	68	3	.0	.0	.0	-.00
5	3	68	4	.0	.0	.0	-.00
5	3	69	1	.0	.0	.0	-.00
5	3	69	2	.0	.0	.0	-.00
5	3	69	3	.0	.0	.0	-.00
5	3	69	4	.0	.0	.0	-.00
5	3	70	1	.0	.0	.0	-.00
5	3	70	2	.0	.0	.0	-.00
5	3	70	3	.0	.0	.0	-.00
5	3	70	4	.0	.0	.0	-.00
5	3	71	1	.0	.0	.0	-.00
5	3	71	2	.0	.0	.0	-.00
5	3	71	3	.0	.0	.0	-.00
5	3	71	4	.0	.0	.0	-.00
5	3	72	1	.0	.0	.0	-.00
5	3	72	2	.0	.0	.0	-.00
5	3	72	3	.0	.0	.0	-.00
5	3	72	4	.0	.0	.0	-.00
5	3	73	1	.0	.0	.0	-.00
5	3	73	2	.0	.0	.0	-.00
5	3	73	3	.0	.0	.0	-.00
5	3	73	4	.0	.0	.0	-.00
5	3	74	1	.0	.0	.0	-.00
5	3	74	2	.0	.0	.0	-.00

DATA FURNISHED BY THE WASHINGTON OFFICE

REG	FOR	FISCAL YEAR	FISCAL QTR	UNCUT VOLUME UNDER CONTRACT	VOLUME SOLD	VALUE SOLD	VOLUME HARVESTED	VALUE HARVESTED	LOGGING COST	HAULING COST	HAUL DIST	VOLUME SOLD SUBJECT TO RATE REDET: ESCALATION	RATE REDET	RATE REDET PRICE CHANGE: OLD	NEW	NO OF SALES
5	15	63	1	156900	9846	42417	62702	-0	-.00	-.00	-0	-0	-0	-.00	-.00	-0
5	15	63	2	-0	8091	136615	53107	231878	-.00	-.00	-0	-0	-0	-.00	-.00	-0
5	15	63	3	-0	47740	375030	8091	39040	-.00	-.00	-0	-0	-0	-.00	-.00	-0
5	15	63	4	-0	77880	564187	19212	191115	-.00	-.00	-0	-0	-0	-.00	-.00	-0
5	15	64	1	244000	900	4530	55072	531998	-.00	-.00	-0	0	0	.00	.00	0
5	15	64	2	-0	17920	142813	27431	199637	10.00	10.17	-0	0	0	.00	.00	4
5	15	64	3	-0	3550	15076	14419	75580	10.00	8.43	15	3550	0	.00	.00	1
5	15	64	4	-0	180346	1325793	27173	349476	10.00	12.06	26	178555	0	.00	.00	11
5	15	65	1	325400	3392	59653	46589	446574	10.22	8.47	11	3000	0	.00	.00	2
5	15	65	2	-0	4600	13945	24826	235966	-.00	-.00	-0	0	32870	14.98	14.98	0
5	15	65	3	-0	8640	116842	10900	93338	10.38	10.81	20	13240	0	.00	.00	4
5	15	65	4	-0	113838	716133	27946	222211	10.27	10.85	24	118310	0	.00	.00	10
5	15	66	1	373300	1110	3842	42566	465935	-.00	-.00	-0	0	0	.00	.00	0
5	15	66	2	-0	1	0	26449	226753	-.00	-.00	-0	0	32870	6.07	6.07	0
5	15	66	3	-0	16725	194231	22106	128458	10.16	5.02	5	16450	0	.00	.00	2
5	15	66	4	-0	142650	1157971	36326	492549	10.14	13.89	37	142650	0	.00	.00	10
5	15	67	1	348600	4000	30338	40666	441329	10.16	7.81	15	4000	0	.00	.00	1
5	15	67	2	-0	1	0	25593	151901	.00	.00	0	0	92370	7.33	7.60	0
5	15	67	3	-0	17046	88472	20992	86833	9.24	7.54	13	16750	0	.00	.00	4
5	15	67	4	-0	103480	423041	27331	286541	9.21	11.03	25	103480	0	.00	.00	10
5	15	68	1	348300	2225	8209	49091	749190	8.52	10.50	14	2225	0	.00	.00	1
5	15	68	2	-0	1	0	31029	322682	8.59	13.07	28	15700	43100	3.37	3.37	1
5	15	68	3	-0	1	0	23762	225466	-.00	-.00	-0	0	0	.00	.00	0
5	15	68	4	-0	98100	1174181	38598	557519	9.31	11.25	34	97800	0	.00	.00	12
5	15	69	1	348600	31903	175098	47158	699048	8.91	17.79	59	31580	0	.00	.00	3
5	15	69	2	-0	16410	164185	35453	496971	10.79	16.87	36	16410	73200	5.67	13.45	2
5	15	69	3	-0	25532	748114	25782	228804	8.34	16.45	36	25400	0	.00	.00	2
5	15	69	4	-0	77100	3020777	29250	607167	9.22	10.14	14	76990	0	.00	.00	7
5	15	70	1	346300	1	0	49328	1031370	-.00	-.00	-0	0	0	.00	.00	0
5	15	70	2	-0	1014	9293	37669	536519	8.32	10.41	13	20750	0	.00	.00	3
5	15	70	3	-0	1	0	30552	308899	.00	.00	0	0	0	.00	.00	0
5	15	70	4	-0	128157	889088	39672	586431	9.14	14.76	28	127610	0	.00	.00	11
5	15	71	1	314800	47972	205360	45271	774560	10.31	12.96	25	43600	0	.00	.00	9
5	15	71	2	-0	41690	311940	23868	133972	12.16	11.82	26	41690	0	.00	.00	4
5	15	71	3	-0	14607	19501	25236	217250	12.99	12.10	31	14400	0	.00	.00	2
5	15	71	4	-0	31000	214544	33748	577348	11.28	14.49	39	31000	0	.00	.00	1
5	15	72	1	257600	711	5873	50921	1197036	10.70	23.50	48	0	0	.00	.00	2
5	15	72	2	-0	720	10551	34585	455955	10.92	16.47	32	0	0	.00	.00	1
5	15	72	3	-0	22600	313030	34177	343817	13.05	15.39	28	22600	0	.00	.00	3
5	15	72	4	-0	93486	2131410	38988	980330	12.26	13.58	29	92001	0	.00	.00	12
5	15	73	1	316900	1	0	48839	1368892	.00	.00	0	0	0	.00	.00	0
5	15	73	2	-0	3380	81927	31771	954465	18.39	12.82	25	3380	0	.00	.00	2
5	15	73	3	-0	33400	1571196	33731	952893	21.04	15.97	36	33400	0	.00	.00	3
5	15	73	4	-0	74534	5086661	34785	1760712	13.40	13.74	22	74534	0	.00	.00	9
5	15	74	1	314200	22449	1579866	42660	894901	16.92	19.92	56	22049	0	.00	.00	3
5	15	74	2	-0	49620	2050856	36794	957022	16.49	11.49	20	47620	0	.00	.00	14
5	15	74	3	-0	5900	394182	23254	674732	16.04	21.09	22	5900	0	.00	.00	1
5	15	74	4	-0	55225	2820089	32797	1535542	16.34	17.73	46	0	340	41.20	47.29	3